

EXPLORATORY STUDY OF ACCESSIBILITY TO PUBLIC BUS TRANSPORT BY
DISABLED PEOPLE IN KLANG VALLEY: A CASE STUDY IN RAPIDKL BUS SERVICES.

By

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ABSTRACT

Klang Valley is currently has an estimated population of 6,471,028 with an area of 2804.5 square kilometers only. Taking into the account on the estimation made by the World Health Organisation (WHO), 15% of the world's populations are people with some form of disability. Hence the number of disabled people around Kelang Valley is estimated about 970,000. However, statistics released by the Jabatan Pembangunan Orang Kurang Upaya, until May 2012 there were only 87,927 people registered disabled in Selangor and Kuala Lumpur. Numbers of private cars in the Klang Valley until May 2012 were estimated at 5,971,259 units. This gives us the impression that the situation in the Klang Valley is quite crowded with people and vehicles, particularly private vehicles.

RapidKL is one of the bus operators that were responsible to provide public bus services in the Klang Valley. In line with the government's goals to improve public transport in the Klang Valley to be the people's choice of transport, RapidKL has taken the initiative to provide disabled-friendly public buses. This began with the purchase of 100 units of disabled-friendly buses in 2007 which started the operations in June of the same year. On top of that, RapidKL also had repair the bus stop and related infrastructure facilities of the public bus system in the main route to be accessible by disabled people (Bernama, 2007).

Even so, there are still complaints from disabled people that the facilities provided to them has not disabled-friendly. They still faced the difficulties to access to public bus services and others public places.

This study was done to see to which extent the disabled people are able to access to the RapidKL pulic bus services and trying to identify the barriers faced by them.

This study uses qualitative method and total sample randomly selected interviewed was 47 respondents. The interview then has been transcribed word by word for the analysis purposes.

The results showed that all respondents have access to RapidKL public bus services but with hardship. Apart from that, the results from this study are also shows that there are some barriers that they have to face when they are accessing to the public bus system.

With the availability of Person with Disabilities Act 2008 and the drastic measures taken by the government to improve the level of access to public transport, it has become a stepping stone in providing a comprehensive accessibility to public bus services for disabled people.

Keywords : Disabled People, Accessibility, Barriers and Public Bus Services.

ABSTRAK

Lembah Klang kini mempunyai penduduk dianggarkan sebanyak 6,471,028 orang dengan keluasan 2804,5 kilometer persegi sahaja. Anggaran yang dibuat oleh Pertubuhan Kesihatan Sedunia (WHO) ialah 15% daripada penduduk dunia adalah orang kurang upaya yang terdiri daripada pelbagai jenis kecatatan, maka, bilangan orang kurang upaya di sekitar Lembah Kelang dianggarkan kira-kira 970,000 orang. Walau bagaimanapun, statistik yang dikeluarkan oleh Jabatan Pembangunan Orang Kurang Upaya, sehingga Mei 2012 terdapat hanya 87,927 orang kurang upaya yang mendaftar di Selangor dan Kuala Lumpur. Bilangan kereta persendirian di Lembah Klang sehingga Mei 2012 pula dianggarkan berjumlah 5,971,259 buah. Ini memberikan kita gambaran bahawa keadaan di Lembah Klang agak sesak dengan orang ramai dan kenderaan, khususnya kenderaan persendirian.

RapidKL adalah pengusaha bas yang bertanggungjawab untuk menyediakan perkhidmatan bas awam di Lembah Klang. Selaras dengan matlamat kerajaan untuk memperbaiki pengangkutan awam di Lembah Klang untuk menjadi pengangkutan awam sebagai pengangkutan pilihan rakyat termasuk golongan kurang upaya, RapidKL telah menyediakan bas awam yang mesra-OKU. Sebanyak 100 buah bas mesra OKU telah dibeli pada tahun 2007 dimana operasinya telah dimulakan pada bulan Jun tahun yang sama. Selain daripada itu RapidKL juga telah membaiki perhentian bas dan kemudahan infrastruktur yang berkaitan sistem bas awam di laluan utama untuk diakses oleh orang-orang kurang upaya.

Walaupun begitu, masih terdapat rungutan dari orang-orang kurang upaya bahawa kemudahan yang disediakan kepada mereka tidak mesra OKU. Mereka masih menghadapi kesukaran untuk akses kepada pengangkutan awam dan lain-lain tempat-tempat awam.

Kajian ini dilakukan untuk melihat yang setakat orang kurang upaya mampu untuk mengakses bas awam RapidKL dan cuba untuk mengenal pasti halangan yang dihadapi oleh mereka.

Kajian ini menggunakan kaedah kualitatif dan jumlah sampel yang dipilih secara rawak adalah sebanyak 47 untuk ditemuramah. Temuramah itu kemudian telah disalin perkataan demi perkataan bagi tujuan analisis.

Hasil kajian mendapati bahawa semua responden mempunyai peluang akses kepada pengangkutan bas awam walaupun ramai daripada mereka mengulas bahawa terdapat ruang untuk diperbaiki lagi. Terdapat juga halangan-halangan tertentu yang perlu mereka hadapi semasa mengakses kepada pengangkutan awam bas.

Dengan adanya Akta Orang Kurang Upaya 2008 dan langkah-langkah drastik yang diambil oleh kerajaan untuk meningkatkan tahap akses kepada pengangkutan awam, ia dilihat sebagai satu batu lonjakan untuk anjakan paradigma yang sangat baik terhadap penyediaan akses kepada pengangkutan awam oleh kurang upaya ini.

Katakunci : Orang Kurang Upaya, Akses, Halangan dan Perkhidmatan Bas Awam.

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LIST OF ABBREVIATIONS

DBKL	Dewan Bandaraya Kuala Lumpur
ICF	The International Classification of Functioning
ICT	Information and Communication Technologies
JKR	Jabatan Kerja Raya
JPBD	Jabatan Perancangan Bandar dan Desa
JPJ	Jabatan Pengangkutan Jalan
KL	Kuala Lumpur
KLCH	Kuala City Hall
KV	Klang Valley
LRT	Light Rail Transit
MP	Majlis Perbandaran
MS	Malaysia Standard
NKEA	National Key Economic Areas
NKRA	National Transportation Access Research Project, 2009
OKU	Orang Kelainan Upaya
Prasarana	Prasarana Negara Berhad

PTEG	Passenger Transport Executive
RapidBET	RapidKL Bus Express Transit
SPA	Suruhanjaya Perkhidmatan Awam
SPAD	Suruhanjaya Perkhidmatan Awam Darat Malaysia
TfL	Transport for London
UK	United Kingdom
USA	United State of America
VCOSS	Victorian Council of Social Services
WHO	World Health Organization
WRD	World Report on Disability

CHAPTER 1

INTRODUCTION

1.1 Introduction

Malaysia is going to be developed country with the currently population is nearest to 29 million (Statistic report 2011). Based to the World Health Organization (June, 2011), has reported that about 15% of the world's populations have some form of disability. According to the report from the International Labor Organization (2009), there are more than 650 million disabled people worldwide with average of 10% from total population in each country. If we take into the account on the percentage estimated by the World Health Organization, the number of disabled people in Malaysia will be 4.3 million people. Issue related disabled people had received intention from Malaysian Government particularly providing the public transport services (Utusan 2011).

Public transport is one of the requirements needed by disabled people for mobility purposes. However, the accessibility by group of these people facing many barriers (Alsnih and Hensher 2003, Metz 2000). In this issue received a great interest from researchers (Metz 2000).

Bus network is the backbone for the land transport system in most cities. Bus routes based on commercial factors alone cannot achieve optimal coverage to the population

in urban areas. Urban bus network planning is important to ensure adequate coverage of bus services and will be integrated into the overall planning of land transport in the region and place (National Land Public Transport Master Plan, 2012). Under Bus Transformation Plan (National Land Public Transport Master Plan, 2012), the government has outlined six key initiative which are Corridor Bus Rapid Transit (BRT), planning the network, enforcement of bus priority routes, improvement of standards of vehicles and drivers, bus infrastructure improvements, improvement of information systems at stations and bus stops and revision of the regulatory framework (National Land Public Transport Master Plan, 2012).

Previous studies had been discussed the issues on Malaysian public bus transportation which were related to passenger satisfaction (Rozmi Ismail 2012), customer expectation and quality services (Rohana Kamaruddin 2012), facilities to visual impaired person at railway station (Fairuzzana Ahmad Padzi 2012), utilization and efficiency of public bus transportation (Jayaraman K 2011), Hazards Identification at Bus Interchanges in Kuala Lumpur (Che Rosmani Che Hassan, 2009), Transforming the land Public Transport System in Malaysia (Azmi Abd Aziz, 2012), Greater Kuala Lumpur's Public Transport: Government Initiatives and Stakeholders Response (Abd Rahim Md Nor, 2011) and Improving Accessibility in Penang State, Malaysia (Christopher (Kit) Mitchell, 2010). However the specific problems faced by the disabled people have not been sufficiently studied in Malaysia.

1.2 Background of Study

Malaysian Disabled Persons Act 2008 (Act 685) was gazetted on July 7, 2008 which a significant starting point level of success to the development of disabled people facilities. Thus, one of the policies outlined by the Land Public Transport Commission in the Land Public Transport Master Plan of Malaysia is to increase accessibility at the disabled (National Land Public Transport Master Plan, 2012). However the issues related accessibilities and facilities on public bus services among the disabilities person still arise. Karim Sulaiman (2010) mentioned that the existing public transport system is not disabled-friendly, which prevents these group from undergoing the daily activities and life in the community. Although public transport in the Klang Valley has undergone the improvement for used by disabled people, but there are still some barriers that cause the disabled people were not free willing to use of the services provided due to buses stations/stops are totally not disabled-friendly (Konsumer Kini, 2010).

Klang Valley is an area in Malaysia comprising Kuala Lumpur and its suburbs, and adjoining cities and towns in the state of Selangor. An alternative reference to this would be Kuala Lumpur Metropolitan Area. Based to the Department of Statistics Malaysia (2011), the total population of Selangor, Kuala Lumpur and Putrajaya is 7,209,175 with the population of Klang Valley area is 6,471,028. This shows that 89% of the population of Selangor, Kuala Lumpur and Putrajaya is concentrated in the Klang Valley. Meanwhile, based on the assumptions by World Health Organization

(2011) whereby it is estimated about 15% from population are having some form of disabilities, this means that 0.970 million people in Klang Valley have some forms of disability. The statistic from Social Welfare Department (2012) shows that in year 2012 for Kuala Lumpur and Selangor there are only 87,927 registered with the Disabilities Development Department. The details are shown in Table 1.1 below:

*Table 1.1 :
Number of Registered Disabled. People*

States	2011	2012
Johor	43,610	50,536
Kedah	26,829	31,975
Kelantan	31,611	35,882
Melaka	18,325	19,900
Negeri Sembilan	18,172	20,849
Pahang	19,822	25,195
Perak	34,630	35,388
Perlis	5,587	6,421
Pulau Pinang	23,183	25,652
Sabah	19,936	19,936
Sarawak	18,036	21,376
Selangor	51,238	58,582
Terengganu	21,398	23,484
Kuala Lumpur	25,940	29,345
W.P Labuan	886	920
TOTAL	359,203	405,441

Source : Social Welfare Department (2012)

Klang Valley consist few main cities in Malaysia is seen to be moving forward from time to time for better improvement in public transport generally and public bus

specifically. Thus, this study will be focused on the accessibility of disabled people in quality and safety aspects on the existing public bus transport in Klang Valley.

Public bus has been chosen as one of the subject in this exploratory study because public bus is cheaper and has better coverage area in Klang Valley compared to commuter and LRT (Che Rosmani Hassan, 2009). Besides that, many disabled people prefer using the bus instead of trains or taxi and minicabs because it is a convenient and comparatively disabled-friendly form of transport (Transport for London, 2010). This study was done to evaluate the effectiveness of the accessibility to public buses operated by RapidKL, a subsidiary of Syarikat Prasarana Berhad.

In the other word, this is an exploratory study for understanding the major barriers in accessing to the use of public bus by disabled people.

1.3 Problem Statement

Klang Valley also has been known as the “National Key Economic Area (NKEA), thus the Kuala Lumpur and Klang Valley areas extends beyond the boundaries of Kuala Lumpur and covered by 10 municipalities, which are Dewan Bandaraya Kuala Lumpur (DBKL), Perbadanan Putrajaya, MB Shah Alam (MBSA), MB Petaling Jaya (MBPJ), MP Klang (MPK), MP Kajang, MP Subang Jaya (MPSJ), MP Selayang, MP Ampang Jaya (MPAJ) and MD Sepang (Greater Kuala Lumpur/Klang Valley, PEMANDU, 2012).

People with disabilities in Malaysia can be considered as one of the most vulnerable of the minority group in the Malaysian population (Dr Kamarulzaman Kamaruddin, 2007). According to the statistic from Persons with Disabilities Development Department, JKM Putrajaya shows that in Kuala Lumpur and Selangor there is only 87,927 registered disabled people up to the second quarter of 2012 (JKM, 2012).

The Malaysian government has realized the necessary to provide public transport services which have special features to be more "disabled friendly" to the disabled people (Ministry of Transport, 2011). Improvements to the bus network are being facilitated by Kuala Lumpur City Hall (KLCH) providing exclusive bus and taxi lanes in the City Centre and comfortable stop facilities. Together these improvements are intended to offer passengers a quick, comfortable and convenient transport option (Kuala Lumpur Structure Plan 2020, 2011).

However, there are many issue related disabled people facilities had been raised. Karim Sulaiman (2010) mentioned that the existing public transport system is not disabled-friendly, which prevents these group from undergoing the daily activities and life in the community. Peter Tan (2012) mentioned that public transport and the built environment continue to remain inaccessible. Thus, an exploratory study need to be conducted for details understanding the problem has been faced by disabled people while accessing public bus transport services.

1.4 Objective of study

The objectives of this study were:

- a. To gain a better understanding of overall disabled people satisfaction in Klang Valley while accessing to public bus.
- b. To identify the issues of accessibility of existing public bus transport structure in Klang Valley.

1.5 Research Question

Taking the all of these issues into account, this research aims to answer the following questions:

- a. What is the current situation of RapidKL public bus services in the Klang Valley used by disabled people?
- b. What are the barriers faced by disabled people in the Klang Valley during while accessing to Rapid KL public buses..

1.6 Significant of Study

The significant of this study can contribute the following areas:

- a. Provide an understanding the obstacles that have to be faced by the disabled people while they are using public bus services in Kelang Valley.
- b. Highlight the significance of the public bus services and social inclusion activities of disabled people in Kelang Valley.
- c. It can provide the authority about the quality of public bus services in Kelang Valley to the disabled people.

1.7 Scope of Study

In this study, the scope of research was outlined to ensure research objectives are achieved.

The scope of the research has focused on the following areas:

- a. The study focused on public bus users among disabled people in Kelang Valley.
- b. The studies have focused on the accessibility and safety of the disabled people while using the public bus services.

1.8 Operational Definition

There are several terminologies used in this study relate to the accessibility to public bus as defined by Oxford Online Dictionaries (2012):

- a. Accessibility : able to be reached or easily got
- b. Barriers : something that stops people from going somewhere or do something.
- c. Barrier – Free : nothing to stop people from going somewhere or doing something.
- d. Disability : an illness, injury, or condition that makes it difficult for someone to do the things that other people do.
- e. Infrastructure : the basic systems and services, such as transport and power supplies, that a country or organization uses in order to work effectively.
- f. Public Bus : a large motor vehicle carrying passengers by road, typically one serving the public on a fixed route and for a fare.
- g. Public Transport : buses, trains, and other forms of transport that is available to the public, charge set fares, and run on fixed routes.
- h. Transport : a system of vehicles, such as buses, trains, aircraft, etc. for getting from one place to another.

- i. Universal Design : broad-spectrum ideas meant to produce buildings, products and environments that are inherently accessible to both people without disabilities and people with disabilities.
- j. Vehicle : a machine, usually with wheels and an engine, used for transporting people or goods on land, especially on roads.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of literature that is relevant to the research topic. Based on the literature, the framework for understanding of the disability, public transport, public bus, disable people and legislation framework are also presented.

2.2 Understanding Disability

Disability need not be a barrier to success (Stephen W. Hawking, 2011). Disability is part of the human condition. Almost everyone will experience temporarily or permanently impaired at some point in life, and those survive to old age will experience increasingly difficulties in functioning (World Report of Disability), 2011). Disabled people specifically and older people generally, journeys need to be seamless whereby no failures to access from the original place to the destination place in their daily life survival. A disability of human may be physical, cognitive, mental, sensory, emotional, and developmental or some combination of these (Transport for London, 2010).

When we talk about disability, we may not realize that if we reach the age of longevity, we had the opportunity to experience this disability. Most of us are born

perfectly but would be exposed to the things it possible he became temporary disability or permanent disability may also be due to high fever, road accidents, and workplace accidents and so on. In the other words disability may occur during a person's lifetime or may be originally from birth.

Disability according to Persons with Disabilities Act 2008 is people who are having long term impairments in physically, mentally, intellectuality or sensory which put them in limitation or restriction situation while executing some tasks or participating in community.

When most people think of the word "disability" they immediately picture someone in a wheelchair. However there are many different types of disability. Disability is caused by impairments to various subsystems of the body.

According to Marina, N. (2006), People with Disabilities divided into three categories:

- a. People who do not have the mental capacity that requires special attention. They include the mentally handicapped, gifted and brain injury.
- b. People who do not have the emotional stability require special attention. This group includes mental illness and emotional disturbances.

- c. People who have no physical ability that requires special attention. This group includes those who are blind or unobstructed view, deaf or hearing difficulty whatever pain and disability.

In Malaysia's context, for the purposes of registration of disabled peoples, the Ministry of Women, Family and Community Development through the department of Social Welfare has classified the disability into seven (7) main categories as per table 2.1.

Table 2.1:
Categories of Disability

No.	Category	Description
1	Hearing Disability	<p>Individuals who are unable to hear clearly without hearing aids or unable to hear even with hearing aids. There are four levels of hearing disability categorized as below:</p> <p>Mild - (20 - < 30 dB) (for adults)</p> <p>Moderate - (30 - < 60 dB)</p> <p>Severe - (60 - < 90 dB)</p> <p>Profound - (> 90 dB)</p>
2	Visual Disability	<p>Individuals who are visually impaired or have low vision in either one eye or both eyes even with visual aids such as spectacles or contact lenses. There are two categories of visual disabilities as below:</p>

Blind

Better eyesight but vision less than 3/60 even with vision aids or visual field is less than 10 degrees from fixation;

Low Vision/Partially Sighted

Eyesight with vision is poorer than 6/18 but equal or better than 3/60 with visual aids or visual field is less than 20 degrees from fixation.

3	Physical Disability	An individual who is suffering from inability of the body to function normally either caused by bodily defect or injury. Disabilities that fall under this category are stunted, crippled hands or legs or both, maimed thumb, paralysis, spina bifida, muscular dystrophy and cerebral palsy. For impairment which does not affect functions such as handicapped one finger, has six fingers or more and without or imperfect earpiece is not categorized as physical disabilities
4	Learning Disorder	Individuals whose intelligence is unbalanced with his or her biological age. People with down syndrome, inert, intellectual disabilities, autism, Attention Deficit Hyperactive Disorder (ADHD), specific learning disabilities (dyslexia, dyscalculia, dysgraphia) and global development delay fall under this category.
5	Speech Disorder	An Individual who is able to hear but with speech problem.

6	Mental Disorder	<p>An Individual who has a severe/chronic mental disorder and undergone treatment or was given diagnosis by psychiatrist for at least 2 years.</p> <p>As a result of the illness, they are still unable to function either partially or fully in relation to himself or herself or with the community even after undergoing psychiatric treatment. Schizophrenia, mood disorder and chronic Organic Mental Disorder are among the mental illness category.</p>
7	Various Disabilities	<p>Individual who has more than one type of disability and not suitable to be classified under any of the five (5) existing categories. For example, an individual who has 2 types of disabilities such as vision and hearing disabilities will be registered under the category of various disabilities.</p>

Source : Official Portal of Public Services Commission of Malaysia, 2012.

2.3 Conceptual and Models of disability – The Medical Model of Disability Versus The Social Model of Disability

Organization of the United Nations through the Convention on the Rights of Persons with Disabilities states that disability is a development of an evolving concept. Disability is no longer just seen as the impact of physical or mental disability

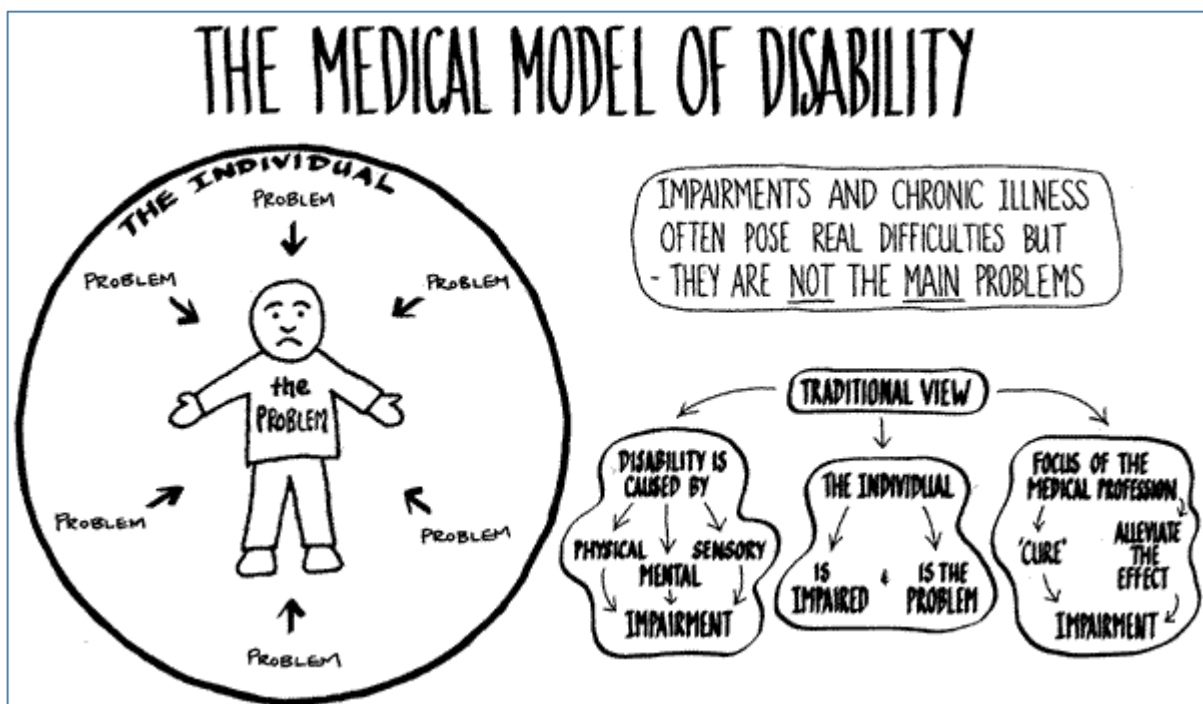
(Hasnah Toran, 2010), but disability is a construct or social view in which disability is seen as a result of barriers arising from attitudes and environments that prevent their full participation equally in society (Organization of the United Nations, 2008).

In the past, disability has been viewed mainly from medical and clinical perspective (Kaplan et al, 1992 and Oliver, 1996). In the present, focus is on the function on how specific causes of disability changes the manner by or limits the extent to which life's activities and actions are performed (B. Olufemi Odufuwa, 2007). Therefore, the social model of disability starts from a different perspective. The social model of disability enables disabled people to look at themselves in a more positive way which increases their self-esteem and independence.

The medical model of disability is a model whereby illness or disability is the result of a physical condition is intrinsic to the individual that may reduce the individual's quality of life and causes clear disadvantages to the individual. Since many disabilities have medical origins, people with disabilities were expected to benefit from coming under the direction of the medical profession. (Oliver, M. and Barnes, C., 1998). The medical model views disability as a problem of the person, directly caused by disease, trauma or other health condition, which requires medical care provided in the form of individual treatment by professionals (ICF, World Health Organisation, 2001). By extension a compassionate or just society invests resources in health care and related services in an attempt to cure disabilities medically expand functionality and improve functioning thus allowing disabled persons a more

normal life. The medical profession's responsibility and potential in this area is central (Putnam, 2002). Under this model, the problems that are associated with disability are deemed to reside in the individual. In other words, if the individual is cured then these problems will not exist. Society has no underlying responsibility to make a place for persons with disabilities, since they live in an outsider role waiting to be cured. The summary of Medical Model of Disability as illustrated in figure 2.1.

Figure 2.1:
The Medical Model of Disability



Source: www.ddsg.org.uk/taxi

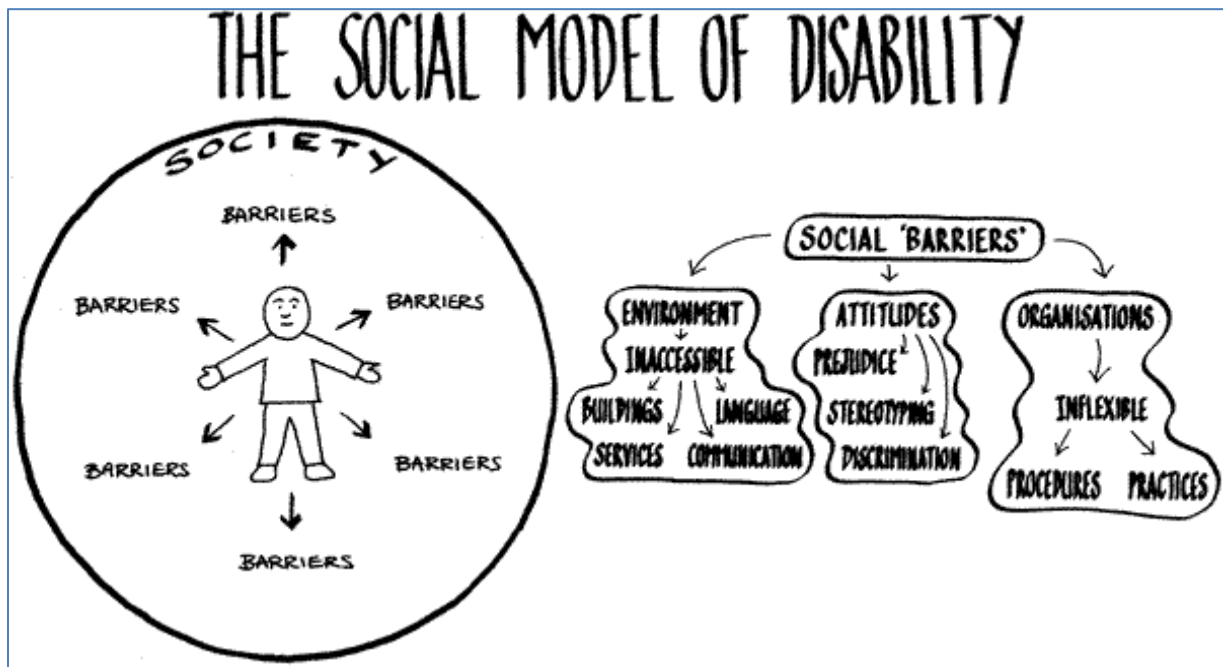
Union of the Physically Impaired Against Segregation (1976), United Kingdom, claimed that disability was: 'the disadvantage or restriction of activity caused by a contemporary social organization which takes little or no account of people who have physical impairments and thus excludes them from participation in the

mainstream of social activities.’ (Putnam, M, 2002 and Mike Oliver (1983) has stated that “social model of disability’ in reference to these ideological developments. Oliver focused on the idea of an individual model versus a social model, derived from the distinction originally made between impairment and disability by the Union of the Physically Impaired Against Segregation (UPIAS). The social model was extended and developed by academics and activists in the United Kingdom, United States of America and other countries, and extended to include all disabled people, including those seen as having mental impairments or disabilities (Oliver, M. and Barnes, C, 1998). The main concern of the social model is equality. Equal rights are seen to give empowerment and the ‘ability’ to make decisions and the opportunity to live life to the fullest. The social model of disability often focuses on changes required in society in which might be in terms of attitudes, social supports, information and safe environment (Peter Beresford 2002).

The social model of disability sees the issue mainly as a socially created problem, and basically as a matter of the full integration of individuals into society. It believes that impairment is not the problem. It is about how the society see the needs to change in order to accommodate disabled people participate in the community. Hence it is requires social action and the collective responsibility of society at large to make the environmental modifications necessary for the full participation of people with disabilities in all areas of social life. The issue is therefore an attitudinal or ideological one requiring social change, which at the political level becomes a question of human rights. For this model disability is a political issue (ICF,World

Health Organisation, 2001). The Social Model of Disabilities as illustrated in figure 2.2.

Figure 2.2:
The Social Model of Disability



Source : www.ddsg.org.uk/taxi

The difference between the Medical Model and the Social Model is that in the medical model believes that impairment is the problem and they need to be made better , and they think themselves are sufferers' problems and never Social Welfare and Social Exclusion be equal to a non-disabled person. This is why they cannot take part in society in the same way as able people. However the social model of disability treats disability as a gap between person and social environment. It looks beyond a person's impairment at all the relevant factors that affect their ability to be a full and equal participant in society (Putnam, 2002).

The Social Model of Disability is seen most appropriate and accurate or more relevant for the purposes of this study. It is because Peter Beresford (2002) this social model approach to disability that sees the problem as society's barriers, rather than the person's condition, allows disabled people to lift the blame from their shoulders and place it squarely onto societies. The social model of disability empowers disabled people to challenge society to remove those barriers (Peter Beresford 2002). In summary, there are some points of how society could change to allow disabled people to participate equally:

Table 2.2:

The Medical Model of Disabilities versus the Social Model of Disabilities

No.	The Medical Model of Disabilities	The Social Model of Disabilities
1	Painful hands, unable to open jars, doors	Better designed lids, automatic doors
2.	Difficulties in standing for long periods	More seats in public places
3.	Unable to climb steps into buildings	Ramps and lifts in all buildings
4.	Unable to hear/ see	Visual/ audio information system
5.	With stick	Reduce gap between platform
6.	Other people won't give the job because they think disabled people unable to do the task given	Educate people to look at disabled people's abilities rather than looking for problems

2.4 The significance and Concepts of Accessibility to Public Bus Transportation by Disabled People

Human mobility is very important for community, economic and human growth and development for all groups of people (Garisson and Ward 2000, Urry 2007, Jones 2008, Staley and Moore, 2009) at all times. Fundamentally, public transport has undoubtedly played a vital role in commuting passenger to work or to places that they desire (Rohana Kamaruddin, 2012) including disabled people.

Transportation is a vital component for independent living, and like others in society persons with disabilities rely on transportation facilities to move from point A to point B (Passenger Transport Executive Group, 2010). The term transportation covers a number of areas including air travel, buses, taxis, and trains. Transport can be classified into 2 which are private transport and public transport. In this context of study, the subject is public transport.

Public transport is usually regulated as a common carrier and is usually configured to provide scheduled service on fixed routes on a non-reservation basis. The majority of transit passengers are traveling within surrounding area between their homes and places of medical, work, education, shopping, leisure Religious, banking etc (B.Olufemi Odufuwa, 2007; Victorian Council of Social Service, 2011; Cristi Harris, 2009 and Passenger Transport Executive Group, 2010).

Cristi Harris (2009) in the National Transportation Access Research Project: A Survey of Riders with Disabilities found that 65% of disabled people to use public transport as their daily mode of transport compared to 35% of other use it. The study also found that 63% of disabled people to use public transport more than 5 years (National Transportation Access Research Project, 2009). Evidently it has shown that public transport is quite significant to the disabled people, therefore it is important to provide public transport facilities which are accessible by all walks of society regardless of their ability.

Access is a word that has a very wide scope. If we surf on the internet, when we type in the word "access" we will be able to see a large number of access refers to access to the website, building, transport, education, medical and many mores. However, in the context of this study, access is meant here is access to public bus transportation. Accessibility is a systemic concept – it is a quality that applies to a transport service or system working as a whole (Victorian Council of Social Service, 2011).

Accessibility is actually related to creating-free mobility chains from door-to-door and implies more than just customized engineering solution (Wagener and Spek, 2006). Accessibility is a key transportation element and is a direct expression of mobility either in terms of people, freight or information (Rodrique, 2004). The concept of accessibility has been part of public transportation planning process to ensure the opportunity for social and economic development (B.Olufemi Odufuwa, 2007). It has

enhances disabled people's right to participate equally in social development (Guerra, 2003).

Disabled people have different access to other transport options to reach their destinations, including motor vehicles, taxis, community transport, active transport modes including walking and cycling, and air and water transport services, so they will be affected in different ways by lack of access to public transport (Victorian Council of Social Service, 2011). In many instances, these are inaccessible to persons with disabilities because either they cannot use them in the first instance (e.g. inaccessible buses, train stations), be more clear, use an actual example; relate to other rights: access to transportation provides access to other rights and vice versa (Review of International Best Practice in Accessible Public Transportation for Persons with Disabilities, 2012). This statement has been supported by Jayamaran K (2011); Robin Carruthaers (2005); B. Olufemi Odufuwa (2007), Passenger Transport Executive Group (2010), Victorian Council of Social Service (2011); Rohana Kamaruddin (2012) and Abdallah Nurdeen Kamba (2007). Hence, from their studies, they have agreed that, public bus transportation system regardless for disabled people or otherwise, it should be:

- a. Accessible whereby the vehicles, stops and interchanges, and the walking routes to and from these, must be designed in such way that, as far as possible, everyone is able to use them without unreasonable difficulty. On the other

words, it is to describe the ease with which all categories of passenger can use public transport.

- b. Available refers to route possibilities, timing and frequency.
- c. Affordable refers to the extent to which the financial cost of journeys put an individual or household in the position of having to make sacrifices to travel or the extent to which they can afford to travel when they want to.
- d. Acceptable whereby people should feel that public transport is something that is equipped to meet their needs as well as comfortable, reliable and convenient. Ali Hussein Hassan Sabeen, Ahmed Elmugtaba Anwar, Zainura Z. Noor (2012) reported that many people they don't prefer to use public bus transportation due to the long time wait at the bus stop.
- e. Safe whereby the passengers will feel safe throughout the journeys in terms of crash (road crash and hazard such as falls, slips, etc.) and crime. Public transport have the potential to attract the share of crimes against persons and property which creates a poor perception of this facility and reinforces a sense of fear resulting that people make less use of public transport, and either have abandon journeys they might have made or have resources to often more expensive and less convenient mode of transport (Eastel and Wilson, 1991). Many passengers may travel in fear for their safety. The factors that have contribute to this sense of fear is the unclean condition of vehicles, stations and bus stops; the frightening effect of vandalism on the system; exposure to often

disruptive, offensive groups and the role of the media in overstating fear-generating incidents occurring both on the public transport system and in the community generally (Public Transport Corporation, 1991).

Lack of transportation access adversely impacts the ability of disabled people to fully participate in the communities (Transit Access Project, 2009). Inaccessible transportation negatively impact quality of life of disabled people by limiting access to employment, political participation, entertainment, religious activities and other community participation (Harris, 2000). This statement has supported by Andrea Lubin (2012) whereby accessibility to public transport is remain as a significant issue for disabled people seeking employment throughout the nation. On top of that according to B.Olufemi Odufuwa (2007) the high rate of poverty among the disabled people can be partly attributed to mobility restriction, social exclusion and marginalization. Her study has reveals that 77.4% of the respondents have no access to private vehicles, while those 20.85% that have the opportunity to own a personal vehicles faces an expensive operational. This statement has supported by the research done by National Transportation Access Research Project (2009), whereby the vulnerability to access to public transport will cause some disabled people face difficulty to access to activities in the community. Example they are difficult to get to work, shopping and so on. As such, public transportation remains the only vital means of mobility for the disabled people to participate in their daily activities. Ensuring accesses to public transportation is a crucial element in reducing the constraints of disabled people (Fairuzzara Ahamd Padzi, 2012).

Among the several mod of public transport, a study conducted in the United States of America in respect of access to public transport by disabled people in 2009 was found that 73% of the users are public bus user (National Transportation Access Research Project, 2009). Similarly, a survey conducted in the United Kingdom in 2010. They also found that most disabled people prefer to use the public bus instead of trains or taxi and minicabs because it is a convenient and comparatively disabled-friendly form of transport (Transport for London, Exploring the Journey Experiences of Disabled Commuters, 2010).

According to the data from National Transportation Access Research Project (2009), 73% of respondents in that study choose public buses as their primary transportation. Exploring the Journey Experiences of Disabled Commuters (2010) showed that disabled people prefer to use public buses because it was easy and convenient to them to use it. Public bus also is one of the main mod of public transports in Klang Valley (Che Rosmani Che Hassan, 2011).Thousands of people has used the bus to reach their destination including disabled people.

2.5 Common Barriers and Barriers-Free in Accessibility to Public Bus by Disabled People

There are several barriers faced by the disabled to access to public bus transportation. Some of these constraints are as below:

a. Overcrowding.

Overcrowding on the various modes of transport and at stations creates specific issues for disabled commuters travelling at peak times. These are difficulties with navigation; inability to change routes if there are service disruptions; and problems caused by the behavior of other commuters (Exploring the Journey Experiences of Disabled Commuters, 2010)

b. Navigation

Disabled commuters find it hard to navigate the through the stations during peak times because of rushing crowds, which leaves them feeling nervous and fearful of being pushed over. This is a particular issue for those with mobility impairments. The navigation difficulties and fear of being pushed or jostled are identified as being particular concerns in stations where there is no step-free access and commuters are forced to use the stairs. As well as causing physical discomfort, disabled commuters also feel anxious about potentially holding up other passengers (Exploring the Journey Experiences of Disabled Commuters, 2010).

c. Inability to Change the Road

Due to a lack of physical mobility, disabled passengers can find it difficult to make changes to their route if there are delays or cancellations to services.

This is emphasized during peak hours when the atmosphere is more chaotic due to the number of people using public transport. They may also find it more difficult to find a member of staff to help advise them on appropriate journey changes to make (Exploring the Journey Experiences of Disabled Commuters, 2010).

d. Inconsiderate behavior from other passengers

Disabled commuters say that other passengers do not take their needs into consideration when at crowded bus stops or on Tube and train platforms. Disabled commuters have to jostle in line in order to board and they also have to wait longer to board the bus or train during peak hours when services, stations and stops are busy. This can lead to physical discomfort and also feelings of frustration (Exploring the Journey Experiences of Disabled Commuters, 2010).

e. Behavior of school children and parents with pushchairs

Disabled commuters also identify issues due to school children travelling during the morning peak hours. This is most often an issue raised regarding travelling by bus. School children are identified as being particularly unwilling to give up their seats and disabled commuters find them loud and disruptive

which contributes to a feeling of being “unsafe, frustrated and neglected” (Exploring the Journey Experiences of Disabled Commuters, 2010).

f. No priority to seat at the bus stop or in the bus

Bus stops pose a number of physical difficulties for disabled passengers. Firstly, disabled customers feel that they are not given priority either for boarding or for seating (Exploring the Journey Experiences of Disabled Commuters, 2010) . Some feel that they must often make a choice between sittings at a bus stop, or trying to make sure they can get a seat on the bus (Victorian Council of Social Service, 2011).

g. Integration between bus and bus stop

Disabled commuters also say that the integration between the bus and the bus stop needs improvement, as physically stepping onto and off the bus to the kerb is tricky. This barrier is aggravated if a bus driver fails to pull up close enough to the kerb, making the step even higher. There is also lack of accessible routes to transit stops (National Transportation Access Research Project, 2009).

h. Travel information and signage

Some disabled people commented that the physical signage in train stations and bus terminals did not suit their needs. Specifically, customers wanted more way-finding information to assist navigation through stations, and more accurate bus timetables in order to plan their journeys with greater precision (National Transportation Access Research Project, ,2009).

Clear signage is fundamental for passengers who have visual impairments, and who require signs that are highly visible.

Taylor (2002) was also indicated that the location, style, content and form of information provision can create barrier to disabled people while they are accessing the public bus.

i. Bus Driver

Taylor (2002) the attitude and skill of drivers and other transport staff Transport for London (2010) make passengers feel that they need more “diversity” training, in the sense that they should be specifically trained to deal with passengers with different types of disability. They understand that some have experience and training at this, but they feel that the inconsistencies in the service they receive from staff could be minimized with greater training.

Some drivers are also poor in attitudes such as not announcing upcoming stops.

j. Network Services

The design of the network, services and operating systems and the way in which the bus system relates to local people in its design and implementation (Taylor, 2002) can also affect disabled people to access to public bus.

k. Design

Oxley and Gallon (1995) found that disabled people who had stopped using mainstream bus services said they would start doing so again if there were lower steps on buses, a lift or ramp for a wheelchair, space on the bus for a wheelchair, the bus moved off more slowly and more frequent bus stops. Taylor (2002) indicated that the need to provide other infrastructure facilities related to access to public buses transportation is also important to ensure that it can be accessed by disabled people perfectly. This has been proved by the Gallon (2000) who found that disabled people are faced the problem to get to the bus stop to catch the bus. An integrated transport system, encompassing accessible public transport, public transport infrastructure and a barrier free pedestrian environment is an essential in order to deliver comprehensive rights for disabled people (Oxley, 2002).

The above list is the barriers that have been identified in the studies conducted by previous researchers. Fundamentally, barrier-free public transports spots to the elimination of barriers in the build environment. The whole range of measures can be taken to eliminate/ reduce the said barrier. Wagener and Spek (2006) have summarized as follow:

a. Infrastructure

Infrastructure measures include creating suitable areas around stops such as with broad pavements, dropped kerbs, safe pedestrian crossings and signposting, sufficient dimensioning of movement spaces and services, and aids to overcome height differences (fixed stairs, ramps, escalators, lifts or moving walkways).

b. Vehicles

Vehicles can be altered to improve accessibility. Measures include sufficient dimensioning of the vehicle doors and the interior, placing devices for passenger safety, such as grips, bars and barriers, matching vehicle and platform levels and providing boarding aids.

c. Information

Information, communication and service systems can be made suitable for all by making sure that service points are accessible and within easy reach and their interior dimensions are adequate, and by providing information at stops and in the vehicle, such as information displays and timetables, external and on-board displays, announcements, other information elements and orientation aids. Ticket machine should be reachable and easy to service.

2.6 Accessibility to Public Bus Transportation Services in Malaysia from Legal Perspective.

In ensuring public bus transportation services available is disabled friendly, the role played by the government cannot be denied. Thomas Waganer (2006) states that one of the four things shall necessary to ensure the accessibility of public transportation is the “government must ensure accessibility”. This is most related to the laws and policies outlined by the government of a country in ensuring the accessibility of public transport by the disabled people. In other words, the role played by the government is also important in ensuring the provision of access to public transport by disabled people through legislation.

In Malaysia, the gazetting of the Person with Disability Act 2008 (Act 685) (PWD Act 2008) on 7 July 2008 brought a pivotal point in the development of legislation related

to Persons with Disabilities in the country. It should also be known that the International Convention Relating Persons with Disabilities has been signed and ratified by the Malaysian government also led to the formulation Disabilities Act 2008 (Mohamad Faizal Che Yusof, 2011). On top of that, the Malaysian sign language was formally accepted as the country's national sign language. The draft further states reasonable accommodation and universal design as fundamental ways of thinking, displaying the country's position regarding disabilities, represented by a privilege-oriented law. Following to that, a five year Plan and National Policy has been established. This indeed is an indicator of support for Disabled People and the direction in which Malaysia's society including disabled people is leading.

2.6.1 Persons with Disabilities Act 2008

Disabled people have a fundamental right to public transportation, given legal status in the Persons with Disabilities Act 2008. It states that disabled persons "shall have the right to access to and use of public transport facilities, amenities and services" and providers of these facilities must ensure that they "conform to universal design".

The Persons with Disabilities Act 2008, passed in December 2007, is the first comprehensive law regarding disable people welfare in Malaysia. From around 2001, in response to International trends, beginning with the Asian and Pacific Decade of Disabled Persons, government agencies, disable

people groups and Non-Government Organizations actively took part in encouraging the establishment of this law.

2.6.2 Policy for Persons with Disabilities

Government of Malaysia under the Ministry of Women, Family and Community Development has created The Disability Policy for recognizing and encouraging the participation of Disabled Persons in social, economic and societal.

Policies disabled the basis of equality of rights and opportunities for disabled people to participate fully in society. This also gave importance to human rights such as dignity, respect and independence to enable them to live independently.

The Disability policy has set four objectives which are provide recognition and acceptance of the principle that disabled people have rights and equal opportunity for full participation in society, ensure that disabled people enjoy the same rights, opportunities and equal access under the law of the country, eliminate discrimination against a person on account of disability and educate and raise public awareness about the rights of disabled people.

Disabled under the Policy Strategy is divided into 15 areas. The 2nd area of these strategies was stated about the 'accessibility' which were ensure the provision of barrier-free environment including inside and outside buildings, workplaces, neighborhoods and public spaces, improve the provision of public transport disabled-friendly and encourage the provision of and access to information and communication technology (ICT). ‘

This policy created with the objective to meet the guidelines set by the convention whereby the Malaysian government has signed the convention in 2008.

2.6.3 Malaysian Standard

Malaysia has standards for accessible buildings (MS 1184:2002) and for access outside buildings (MS 1331:2003) [DSM, 2003]. Legislation for the building requirements of people with disabilities was enacted in 1990 through an amendment of the Uniform Building By-Laws 1984.

2.6.4 Public Work Department (JKR)

The federal Public Works Department JKR has guidelines on pedestrian facilities (Nota Teknik Jalan 18/97) [JKR, 1997] which require scheme engineers to consider the needs of elderly people and people with disabilities.

2.6.5 Town and Regional Planning Department

Town and Regional Planning Department of Peninsular Malaysia have also established a special standard in urban planning in which it takes into account the features of access for the disabled. Some of the facilities associated with access to public transport included in this standard are pedestrian walk, pedestrian crossings, guiding block / tactile blocks, bus stop, step ramp / dropped kerb, ramp, handrail, signage and symbols and street furniture (The Universal Design, Town and Regional Planning of Peninsular Malaysia, 2012).

2.6.6 Building , Drainage and Road Act 1974

It requires owners of public buildings and local authorities to make sure every public building can be used by disabled people by providing appropriate facilities and infrastructures.

2.6.7 Suruhanjaya Perkhidmatan Awam Darat Malaysia (SPAD)

Public transport services should be the main thrust of the government's strategy for traffic separation. Demand for mobility in big cities will not be able to increase further supported by the increase due to the current increase in the use of infrastructure (not ownership) of private vehicles away across the existing infrastructure improvement capabilities (Suruhanjaya Perkhidmatan Awam Darat, 2012).

SPAD will play a central role in improving road and rail-based public and freight transport in the country. The Land Public Transport Act 2010 expressly states that SPAD shall propose policies and plans in relation to or affecting land public transport, and develop strategies in line with the approved policies and plans with a view to achieving a safe, reliable, efficient, responsive, accessible, planned, integrated and sustainable land public transport, while ensuring the provision of affordable services for the carriage of passengers and competitive services for the carriage of goods. Improving public transport is one of the National Key Results Areas in the Government Transformation Plan initiated by Prime Minister YAB Dato' Sri Mohd Najib Tun Abdul Razak in 2009 (Suruhanjaya Perkhidmatan Awam Darat, 2012).

The mission statement of SPAD is “ Ensuring a safe, reliable, responsive, accessible, planned, integrated, affordable and sustainable land public

transport system to enhance economic growth and quality of life” while SPAD vision is “ To lead the transformation of public transport to become the rakyat’s mode of choice” (Suruhanjaya Perkhidmatan Awam Darat, 2012). Thus, one of the policies outlined by the SPAD in the Land Public Transport Master Plan of Malaysia is to increase accessibility at the disabled (National Land Public Transport Master Plan, 2012)

Transportation system design of many existing public land does not take into account disabled. For example, the design of bus stops could not be used by disabled people. Improvements that can be implemented are providing transportation and infrastructure that are user friendly, especially the disabled, including the provision of labor that is trained to assist all users (Suruhanjaya Perkhidmatan Awam Darat, 2012).

Project development of new land public transport should take into account the needs of all users, including the disabled and the investment required. At the same time, existing infrastructure upgraded in stages. Guidelines on accessibility at the appropriate infrastructure approach also provided (Suruhanjaya Perkhidmatan Awam Darat, 2012).

Coordination and efficient delivery system is needed to ensure the development of bus transformation and integration achieved consistently high. In ensuring that passengers get the proper information, Passenger

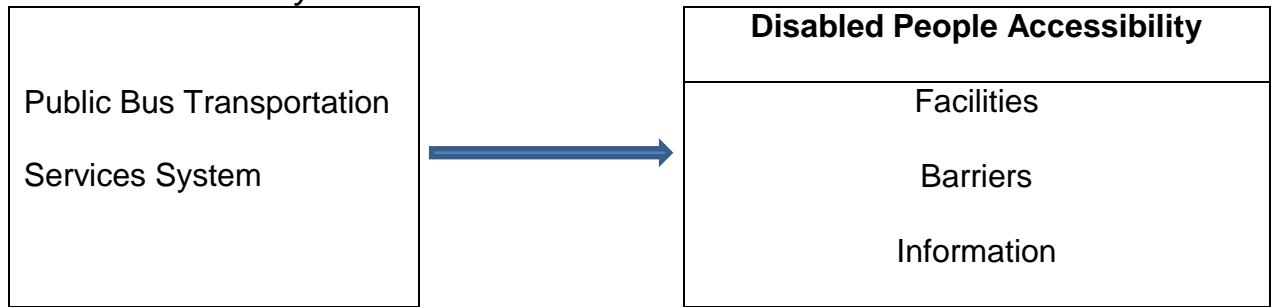
Information System has been prepared based on the few key elements which is consolidated respiratory of public transport related information including routes and time-tables, online portal with journey planner service to enable passengers to access relevant information in a user-friendly manner and real-time information systems to allow users to assess the arrival time of buses (National Land Public Transport Master Plan, 2012).

Under subsidiary plan 2 of Bus Transformation Plan (National Land Public Transport Master Plan, 2012), the government has outlined six key initiative which are Corridor Bus Rapid Transit (BRT), planning the network, enforcement of bus priority routes, improvement of standards of vehicles and drivers, bus infrastructure improvements, improvement of information systems at stations and bus stops and revision of the regulatory framework (National Land Public Transport Master Plan, 2012). SPAD is a comprehensive jurisdiction in which it is to monitor the development of land transport program in Malaysia.

2.7 Framework of Study

Based from the literature review above and discussion on the related issues, the framework of study was developing as the figure 2.3 below:

*Figure 2.3:
Framework of Study*



This study was explored the accessibility of public bus services by disabled people. The items focused were on the services of the public bus operation and facilities which related to the facilities, barriers and information.

2.8 Conclusion

Based on a literature review, in conclusion can be said that, facilities and infrastructures to access to public transport (in general) and bus transportation (in particular) is important for the use of disabled people. Studies done shows that although provision has been made the best possible for them to access to public bus, but there are still barriers that have to be faced by them while using the services. Recent scenario in Malaysia is that the government has begun to take steps to improve the quality of access to public transport by disabled people either by the laws or by enforcement. With the Act, policy, guidelines and related bodies, improving access to public transport buses in the Klang Valley can be seen significantly today.

CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter discuss the methodology applied in this study. It contains research design, population, sampling, interview protocol, data collection process and analysis of data. This study was designed as an interview based research using a qualitative research approach. The qualitative data was collected through site observation and interviews. The interview sessions involved the disabled users. The questions are based on the current condition and accessibility to public bus transportation of RapidKL bus. Interviews were audio recorded at the participant's place, with participant permission, and lasted between 60-80 minutes. This study also applied a phenomenological qualitative study due to the objective of study to explore the experiences in terms of accessibility among disabled people on the RapidKL public bus services in Klang Valley. According to Merriam (1998) the focus of phenomenological study is upon the “essence or structure of an experience (phenomenon). Berg (1998) further supports that qualitative study enables a researcher to share in the understandings and perceptions of other individuals and to explore how they structure and give meaning to their daily lives. It requires the researcher to interpret the experiences, which the respondents encounter.

3.2 Instrumentation Tool.

In this study, there are 2 instrumentations was involved to measure the accessibility and barriers to public bus by disabled people which are interview and observational study. The interview protocol were adopted from The National Transportation Access Research Project : A Survey of Riders with Disabilities (2009), while the observation checklist was adapted from Lothan Bus Accessibility Report , Accessibility Review April (2012), Transport & Social Exclusion: Have We Made the Connections in Our City? (2010), Optimizing Models for Selecting Bus Stops for Accessibility Improvement for People with Disabilities (2010), Introduction & Guidelines List and Planning Standards (2011), A Review of International Best Practice in Accessible Public Transportation for Persons with Disabilities (2010) and Victorian Council of Social Service (2010).

3.3 Research design

This study research design consist three stages which are preliminary study, data collection and analysis. This is exploratory study whereby there is very little knowledge or information is available on the subject under investigation (Uma Sekaran and Roger Bouie, 2009).

The details are explained by figure as per appendix 1 attached.

3.3.1 Population and Sample Identifying

This study population is comprised of people with disabilities in the Klang Valley. It was unclear what their exact number, but based on the total population in the Klang Valley is predicated estimated there were more or less 945,000 disabled people who live there however only 87,927 peoples are registered with Department of Social Welfare, Malaysia. The study population was made up of disabled people who use RapidKL public bus services in the Klang Valley. They may consist of blind, hearing and physical disabilities.

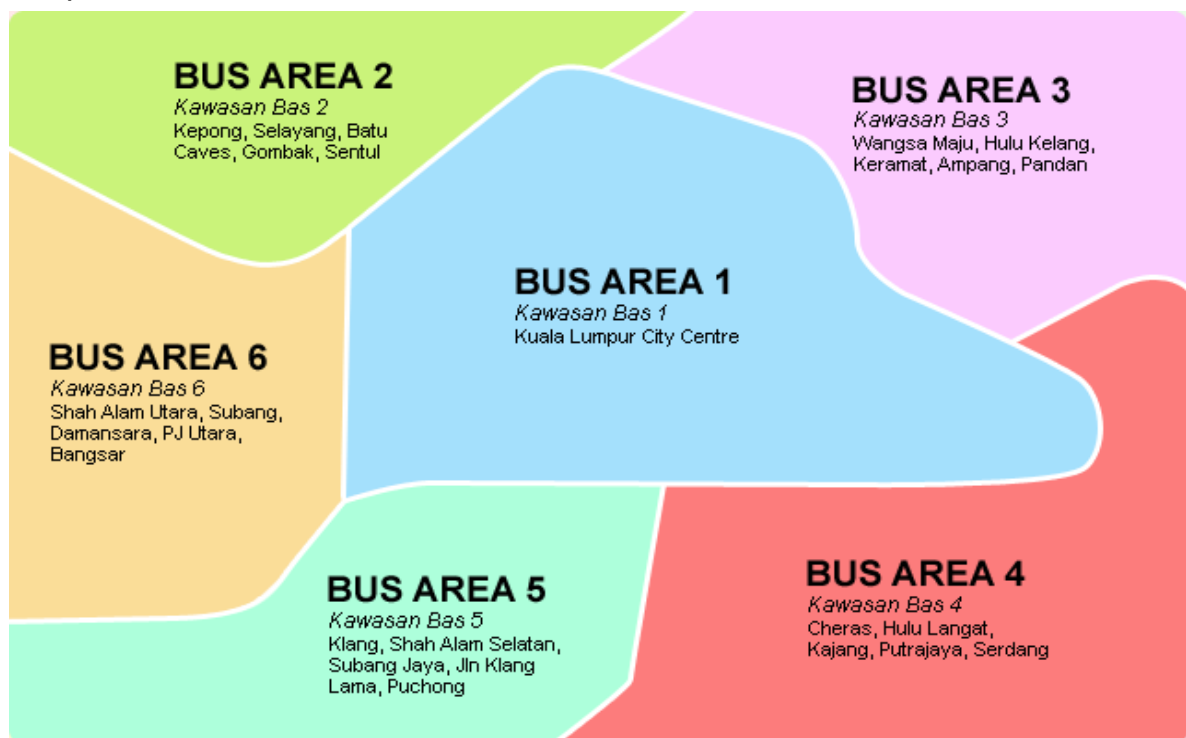
The participants were chosen through random sampling, whereby it “is based on the assumption that the investigator wants to discover, understand, and gain insight and therefore select a sample from which most can be learned” (Merriam, 1998). There are ‘no hard and fast rules about numbers however qualitative research in old age and aging has used experiential cell sample sizes of from 10 to 100, with clustering around 50’ (Rubinstein, 1994). Others writing in this area suggest ‘12-20 (data sources) when looking for disconfirming evidence or trying to achieve maximum variation’ (Baum, 2002). Qualitative research is about ‘discovery of facts’ and not necessarily hard evidence.

Whilst there are no closely defined rules for sample size (Baum 2002; Patton 1990), sampling in qualitative research usually relies on small numbers with

the aim of studying in depth and detail (Miles & Huberman 1994; Patton 1990).

The sampling technique introduced in this study was the area sampling. Area sampling is a form of cluster sampling within an area and it is less expensive than most other probability sampling designs, and it is not dependent on a population frame (Sekaran, 1992). In the present study the cluster were identified as the 6 areas in Klang Valley Area as shown as below.

Figure 3.1 :
RapidKL Bus Area



Source : www.rapidkl.com.my

The total sample for interview is 47 persons with disabilities ranging from 22 blind people, walking with a stick of 7 people, deaf of 11 people and wheelchair of 4 people whereby the total number of 48 routes were selected randomly to be observed. Interview initially made at random with an arrangement with 3 agencies of disabled people namely the Malaysian Association of Blind, the Society of the Orthopedically Handicapped and the Malaysian Deaf Federation to interview disabled people under their organization. In addition, photographs were taken to further strengthen the data.

3.3.2 Type of sampling and procedure

This is explorer study, thus the random sampling was applied. A total of 87,927 were registered under Jabatan Kebajikan Masyarakat Malaysia (JKM, 2013). The sample size of 47 were determined based on Miles & Huberman (1994) and Patton (1990) whereby according to them the research usually relies on small numbers with the aim of studying in depth and detail.

A simple random sampling was selected to choose one out of six area in RapidKL Bus Areas. Each of the areas was written in different piece of paper, which was later selected randomly. As a result of this procedure the area selected was Kuala Lumpur Center. If the number of sample does not meet

the determined sample size then an additional area needs to be randomly select.

3.3.3 Interview Protocol

Interview protocol was adapted from a study conducted by Transit Access Project, the National Transportation Access Research Project: A Survey of Riders with disabilities (2009) (Appendix 2).

The interview protocol consists of 9 sections in Table 3.1 Section A, B, C, D, E, F, G and H sought to measure items that are related to overall satisfaction with the public transport and public bus services, issues and contribution of public bus services in disabled people life while section I consists of the questions to gather the information about the profile of the respondent.

Table 3.1:
The lay-out of the interview protocol.

Section	Description	Item	Length of interview
A	Transportation use <ul style="list-style-type: none"> • Means of transportation • Pas 6 moths of use of public transport • Reason of not using of public transport • Impact of lack of accessible of public transport • Willingness to use public transport if available 	5	Maximum of 6 minutes
B	Public Transportation User <ul style="list-style-type: none"> • Describing used of public transport • Modes of public transport use 	2	Maximum of 6 minutes
C	Fixed Route Barrier <ul style="list-style-type: none"> • The barriers in public transport encountered for the past 6 months 	1	Maximum of 10 minutes
D	Public Bus <ul style="list-style-type: none"> • Used of public bus for past 6 months • Ability to use public bus 	2	Maximum of 3 minutes
E	Public Bus Rider <ul style="list-style-type: none"> • Frequency using the services • Purpose of use 	2	Maximum of 6 minutes
F	Public Bus Barriers <ul style="list-style-type: none"> • Barriers encountered while using public bus in the past 6 months 	1	Maximum of 10 minutes

G	Descriptive Experience <ul style="list-style-type: none"> • Memorable experience • Hard experience 	2	Maximum of 6 minutes
H	Access <ul style="list-style-type: none"> • Overall accessibility • Duration • Overall improvement • Most important issues • Impact of lack of public bus • Understanding of OKU Act • Information received • Internet at home 	8	Maximum of 15 minutes
I	Demographics <ul style="list-style-type: none"> • Types of disability • Gender • Race • Year of born • Family status • Employment status • Education • Household Income 	8	Maximum of 8 minutes
ESTIMATED TOTAL LENGTH OF INTERVIEW			70 minutes

Respondents will be informed in advance about the study conducted before an interview. This is intended to give a better understanding to the respondents and they were able to provide accurate answers when asked questions later. The interview started with open-ended and multiple choice questions regarding the participants' current status (age, marital status,

gender, living conditions) and personal opinion about different features of public transportation, bus stops, and trip planning.

The whole interview session took around 70 minutes. The interview was informal, using a topic guide to organize the flow of the conversation. The discussions in the interviews expanded on the questions from the questionnaire and built upon the answers they gave before. Such an approach provided the elderly participants with the opportunity to express them in more depth and share more of their opinions. Several ideas came out of these discussions. Some ideas were addressing and discussing problems in either the physical or service aspects of public bus. While other ideas were more developed and resulted with potential solutions to some of these problems.

3.3.4 Observational Study

Whereas interviews elicit responses from the subjects, it is possible to gather data without asking question from the respondents (Uma Sekaran and Roger Bougie, 2010).

To further strengthen the results obtained through interviews, observation of public transport bus services around the Klang Valley is made. Perhaps it is also to note the effects of the environmental influences on the specific

outcomes such as influence in universal design and disabled people's behavior.

Overall, the observations made are based on nonparticipants-observer with structured observational study. This approach was taken so that the observations made more accurate and can reduce the amount of the left over elements to be addressed.

In this approach, the researcher just needs acting as nonparticipant observer by collecting the necessary data without becoming an integral part of the disabled people ((Uma Sekaran and Roger Bougie, 2010). The list of observations is adapted from Lothan Bus Accessibility Report, Accessibility Review April (2012), Transport & Social Exclusion: Have We Made the Connections in Our City? (2010), Optimizing Models for Selecting Bus Stops for Accessibility Improvement for People with Disabilities (2010), Introduction & Guidelines List and Planning Standards (2011), A Review of International Best Practice in Accessible Public Transportation for Persons with Disabilities (2010) and Victorian Council of Social Service (2010). (Please refer to appendix 3).

RapidKL bus services area in the Klang Valley is divided into 6 regions, namely Area 1, Area 2, Area 3, Area 4, Area 5 and Area 6 with the total routes of 185 routes (Appendix 4 and 5).

3.3.5 Data collection

Data collection was divided into two, which is primary data collection and secondary data collection.

a. Secondary Data Collection

Secondary data were obtained through websites, related organizations, reference books, academic journals, newspapers or newspaper articles, statistical reports, annual reports and so on.

b. Primary Data Collection

The primary data obtained through two methods, which are structured interviews and structured observations. Data collection through interviews and observations were made starting from the mid-September 2012 until mid-February 2013. This is to maximize the total sample interviewed and also to ensure the maximization of the observation of RapidKL bus route can be done.

3.3.6 Data analysis techniques

The simple mathematical calculations to calculate the percentage of the interview results has been used for this study.

3.4 Conclusion

This study is a qualitative study where the data obtained through interviews and observations was analyzed by using simple percentage distribution. Interviews and observational study was carried out aimed to explore in depth on perception of the disabled people about their ability to access to the public bus transportation.

CHAPTER 4

ANALYSIS OF DATA

4.1 Introduction

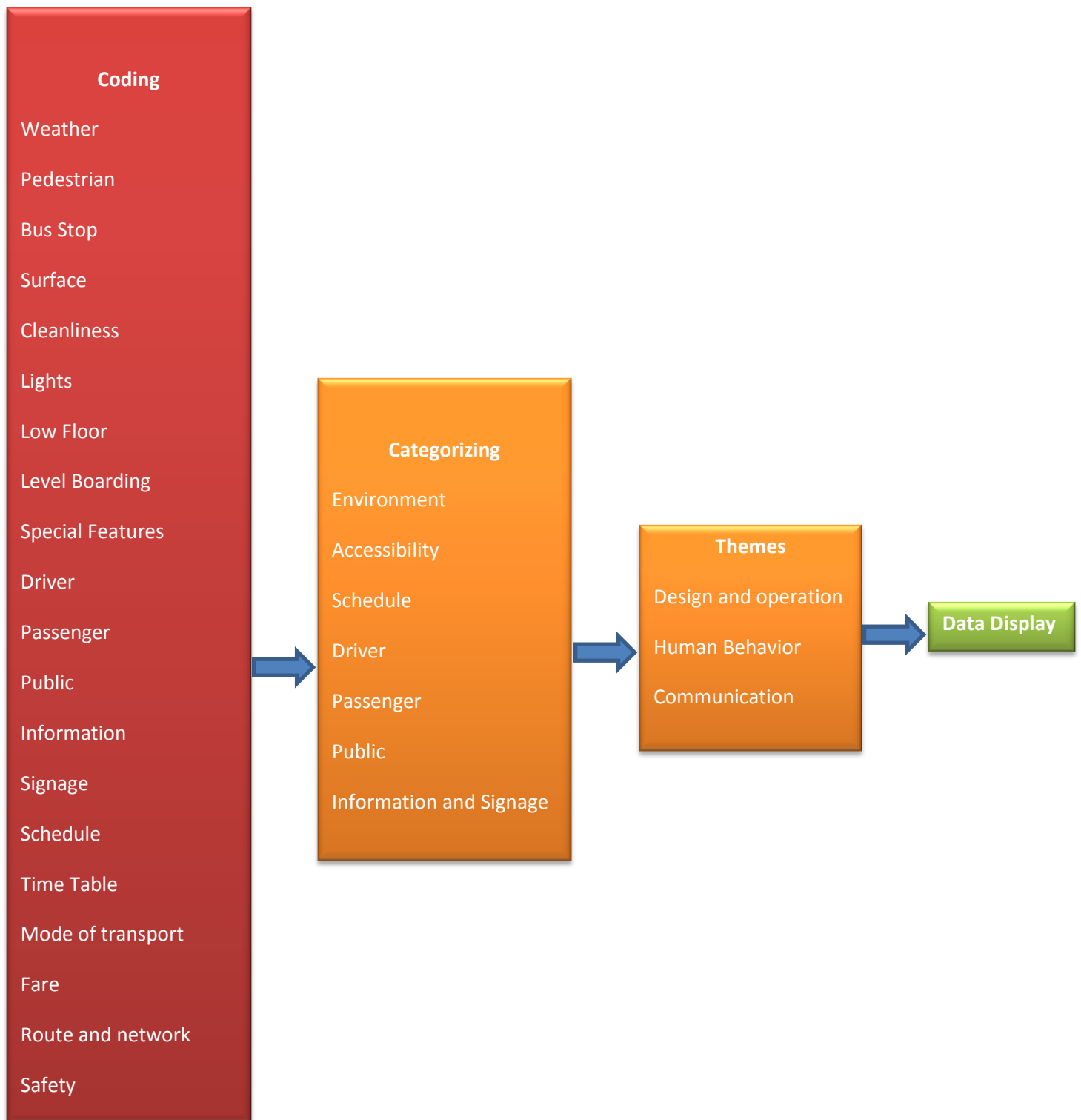
This chapter describes in detail how the data obtained through interviews were analyzed in 3 stages and it was presented in the form of text, tables or charts. The stages of the data analysis are as shown in the figure 4.1. Analysis done is to prove the extent to which the truth of the problem statement as stated in Chapter 1.

All data were transcribed from tapes by direct transcription word by word and further analyzed through coding and categorizing until a set of themes derived. Interpretations related to the accessibility were made based on the emerged themes.

The data obtained on the observational basis is made based on checklist. The elements listed in the checklist was marked either 'yes' or 'no'. If the elements in the checklist are not in appropriate condition, it has been marked as 'no'.

All collected data is then made the comparison by simple mathematical method to calculate the comparison based on a percentage.

Figure 4.1:
Stages of Data Analysis



4.2 Data Processing

Data were gathered involving face-to-face in-depth interviews with respondents in which appointments were set before the meeting. This has been applied by Aida Hafifah Mohd Tahir (2007), Che Rosmani Che Hassan (2009), Anita Ramguttty-Wong (2011) and many mores. The interviews were conducted on an individual basis, using a semi-structured set of questions. The interviews were facilitated using a voice recorder.

The data from voice recorder were transcribed word by word and further analyzed through data reduction namely coding and categorizing until data saturation is captured whereby (Glaser and Strauss (967) there is the point at which “no additional data are being found whereby the development of properties of the category can be done and a set of themes derived.

Firstly, data is encrypted prior to some code based on the literature review made. Other than that the codes are also based on how frequent it was repeatedly mentioned by respondents during their interview. These codes developed as found in Figure 4.1.

Secondly, from coding it subsequently further reduced by categorization. These codes are divided into 7 categories namely environment, accessibility, schedule, driver, passenger, public and information and signage.

Thirdly, from categorizing and comparing these different reactions, the themes have been developed to enhance the understanding. Interpretations related to the accessibility were made based on the emerged themes namely design and operation, human behavior and communication. Thomas Wagener (2006), has suggested that to ensure the public bus system is efficiently accessed by disabled people, there are 3 elements should be considered namely vehicles, infrastructures and information and communication. However in this study, the said elements has been adjusted to vehicle design and operation which included vehicles, related infrastructures of public bus system and its operations, human behavior which include attitudes of bus drivers, bus passengers and the public, while information and signage included all types of information required by passengers to access bus the public bus transportation system. In order to maintain and strengthen the validity and reliability of this study, observational checklist was incorporated.

The consistent format to transcribe the interview data from the voice recorder was approached. Each transcript had been independently read several times so that the data was familiarized and could make sense of it.

4.3 Finding

The findings from the interviews conducted are as follows.

4.3.1 Demography

Respondents interviewed among 22 of blind people, 7 of walking with stick, 14 of deaf people and 4 of wheelchair users. Based on observations made, most of the public bus transport users among disabled people are those who are blind and deaf. Respondents among those who walking with stick and wheelchairs user was interviewed with the intention to assess their ability to access to RapidKL public bus transportation due to the statement as stated in the problem statement whereby the RapidKL public bus has provided facilities for physical disability user, particularly for those on wheelchairs.

The age of the interviewed respondents are between 21-51 years of age in which 8 of them were female and 39 others were men.

Based on the survey results, 32 respondents are married and lives with their families members, 4 are single and lives with their children or alone, and 11 others were single and unmarried.

The majority of respondents interviewed are Malays with 42 people, Indian 4 people and Chinese only 1 people.

Even though they are disabled people, but most of them are educated and undergo a proper schooling system. Some of them completed Malaysian Certificate of Education, Malaysian Higher School Certificate, Bachelor Degree and also other skills such as Certificate in Massage Skills and Certificate in Computer. For those who have visual impairment, all of the respondents are able to read and type in Braille. They attend the Braille class at Malaysian Association of Blind People located in Brickfields, Kuala Lumpur.

Some of the respondents not be disabled since they were born but they become disabled after they are born, that is when they were babies or even when they are already teenagers or adults.

“I was a wheelchair user in the last 7 years after being involved in a road accident while working outstation. I cannot accept that I was not able to walk anymore, but my family and my friends always gave me the support and encouragement which finally I am able to accept my situation.”

-Male, Wheelchair User-

From the socio-economic perspective, some of them are working part-time, full-time or self-employed person other than received the monthly assistance from the Social Welfare Department. 15 of them are earning the household income of more than RM2, 500 a month and qualify themselves for not eligible to receive assistance from the Social Welfare Department.

"I am married by my husband just passed away 2 years ago. I was lucky because my children are teenage and adults. 2 of them are working and 1 is still schooling. Thank God because they are not blind like me. I sell these tissues to support my income. I should not be too dependent on my 2 children who had worked because one day they will have their own family and I do not intend to make them in difficulties because need to support my life. I prefer to be independent in looking for my income."

-Female, Blind-

Demographic information of the respondents was summarized as in Appendix 6.

4.3.2 Transportation Use

Respondents in this study have several range of choice in the use of transport for their mobility. A total number of 7 respondents rely more on their own transportation as lacking the confidence to use public services; 3

other respondents are more comfortable using taxi and the rest of about 37 respondents use public transport consisting of public buses and others mode of public transport. The survey conducted by Harris Christ (2009), Andrea Lubin (2012) and B. Olufemi Odifuwa (2007) also showed similar results.

4.3.3 Public Transportation Use

85% of respondents are relying on public transportation in their daily lives, while 15% only use once in a year. Out of 40 people who use public transport services as their mode of transportation, they are mostly using a combination of public transport to get to their destination such as a combination of bus and monorail, buses and LRT, buses and commuter, and so on. However, the public bus transportation is the main mediator of transport in order to connect them to the other of mode of public transport. This question is intended to identify the modes of public transport that are often used among disabled people around Klang Valley.

4.3.4 Public Bus

85% of the respondents in this study using RapidKL public bus services in the Klang Valley for the past 6 months, while 15% were not using it

frequently or some of them are none at all. The frequency of usage of bus by respondents is tabled as follows:

Table 4.1:
Frequency Used of Public Bus

Details	%	Remarks
< once a month or less	15	<i>I've tried to take the bus but when faced with the difficulty of ride, I have never tried it again. With the crowds passengers and the bus is always full is a nightmare for me. The bus driver was not bothered to help me. Amazingly during Rapid KL buses that have facilities for the disabled were launched, everything looks fine.</i>
2-4 times a month	7	
1 – 2 times a week	12	
More than 2 times a week	66	<i>"I use public bus almost every day to go for work. It is cheap. I ride the bus from my house and then change to train to get to the office. Until now I did not have any problems with this daily routine."</i>
Others	0	

-Female, Wheelchair User-

-Male, blind-

The purpose of the traveling was intended to go to work with the percentage of 100%, 100% for shopping and leisure and rest 24% for other purposes. Disabled people need to access to public bus so that they could

attend their daily activities such as work, school, shopping, etc (Transport for London, 2010).

4.3.5 Accessing to RapidKL Public Bus Services by Disabled People

The significance of this study is that to gather the maximum information related to access to public transport buses. The process of data analysis was divided into three parts, namely a) coding, b) categorizing and c) themes. Information obtained through interviews was divided into three themes: a) Design and Operation, b) Human Behavior and c) Communication. Details of the finding are as per table 4.2:

Table 4.2:
Interview's Results.

Themes	Categories and Codes	Accessible		Barriers	
		No.	%	No.	%
Design & Operation	<u>Environment</u>	27	57	20	43
	<i>Get wet while raining</i>			20	100
	<i>Buses are dirty/smelly</i>			3	5
	<u>Accessibility</u>	26	55	21	45
	<i>Inaccessible to the bus stop</i>			5	24
	<i>Need assistant to the bus</i>			16	76
	<i>Inability to change the bus</i>			7	33
	<i>Bus too crowded</i>			21	100
	<u>Schedule</u>	0	0.00	47	100
	<i>Buses are late</i>			47	100
	<i>Too long waiting at the bus stop</i>			25	53
	<i>Not sure for the bus arrival</i>			47	100
Human Behaviour	<u>Driver</u>	24	51	23	49
	<i>Unhelpful Driver</i>			21	91
	<i>Rude</i>			23	100
	<i>Not utilised the facilities</i>			18	78
	<i>Stopping the bus at not the bus stop</i>			23	100
	<u>Passenger</u>	25	53	22	47
	<i>Not helpful</i>			8	36
	<i>Nor giving priority</i>			15	68
	<i>Jostle</i>			22	100
	<u>Public</u>	27	57	20	43
	<i>Not helpful</i>			5	25
	<i>Abuse the facilities</i>			11	55
Communication	<u>Information and signage</u>	14	30	33	70
	<i>No bus map at the bus stop</i>			11	33
	<i>No bus stop number</i>			9	27

Communication – cont.	<i>Visual signage information are not working</i>			10	30
	<i>No audio information</i>			20	61
	<i>No bus schedule at the bus stop</i>			26	79

If the answers received from respondents were positive on the subject chosen, it is considered as facilities accepted, and if the answer from respondents is negative, then it is treated as barriers.

4.3.6 Barriers in Accessing to Public Bus by Disabled People in Klang Valley

The main findings in this exploration study are concerned with the barriers that are often experienced by disabled people when they use public bus services around the Klang Valley. Among the noticeable is the inability to reach the bus in time, the attitude of the bus driver and other passengers as well as the facilities provided are not used as intended.

a. Design & Operation – Environment

Interview results showed that 20 (43%) respondents faced problems in terms of the environment. 100% from them are agreed that raining is a problem for them because it can cause them getting wet and only 5% (3 person) stated that the buses are dirty and smelly. However, as a result of the observations made by me, I found the bus is clean and

odorless. However from my observation I found that the air-conditioned of some of the buses are leaking. There is water dripping from the air conditioner.

“When it's raining, I always wet even have an umbrella with me. Bus stop looked quite small compared to the number of passengers waiting for a bus at one time to make specifying the passengers will get wet if it's raining.”

-Male, deaf-

“Most of the public buses are dirty and smelly. I am less comfortable. Sometimes there is food and water spills cause dirt on my pants or shoes.”

-Male, with stick-

b. Design & Operation – Accessibility

21 respondents have indicated that they face some forms of difficulties during accessing to public bus transportation. 24% of them are difficult to access to the bus stop, 76% is requiring assistance to access to the bus, 33% find that they are difficult to change buses if their destination required them to use more than 1 bus, and 100% indicated they have to face with a crowded of passenger on the bus.

All respondents are agreed that the major barriers to them while accessing to the public bus is that the bus was crowded with the passenger during peak period. Even though they are not happy with that situation and make them tired when they are arriving home, but they have no other options except to accept the situation.

This issue have similarity as found in the research done by Transport for London in 2010 (Exploring the Journey Experiences of Disabled Commuters) that overcrowding on the various modes of transport creates specific issue for disabled people traveling at peak times. Due to a lack of physical mobility, disabled passengers find it difficult to make changes to their route if there are delays or cancellations of services. Disabled people find it hard to navigate through the stations during peak times because of rushing crowds, which leaves them feeling nervous and fearful of being pushed over.

“As a wheelchair user, it is quite difficult for me to access to the bus stop. This is because the condition of the road and pedestrian is not really convenient for me to go alone to the bus stop. I also feel less confident in the quality of facilities available to us. I also wondered whether the facilities provided are really safe for us to us or not.”

-Male, wheelchair user –

“Crowded passenger on the bus during the peak time brings hardship to me to catch the bus. To get a seat on a bus in crowded passengers that is not possible, but quite rare. If passengers are not many and the situation in the bus are convenient, it is more easy other passenger to offer me the seat.”

-Male, with stick-

“I had to face with crowded conditions on the bus or in the train almost every day. I have to take the Star LRT before boarding to the bus to get to work. The situations are the same. But because it is affordable that is why I am using it.”

-Male, deaf-

c. Design & Operation – Schedule

The data obtained from the respondents said that another barrier encountered was related to the schedule of the bus journey. They cannot predict the exactly time of the bus arriving at the venue they are waiting for and makes them unsure of bus arrival time. All respondents who were interviewed gave the similar statement. 100% of respondents also said that mostly waiting time become long because the bus always arrives late.

The positive aspect of traveling during peak period is about the frequency of buses (Transport for London, 2010).The schedule of buses will be adjusted accordingly during peak period which lead to reduce passengers waiting time.

However, in Malaysia, based on the opinion of the respondents interviewed, it found that to adjust the schedule of the public transport during peak period is the most practical for train services but not for public bus services. This is because the road was congested by private vehicles during peak hour which will lead to the late arrival of the busses.

“Bus would be late mostly and become a habit. Late arriving of the busses is very norm to all of us. Usually among us, when the bus arrived on time, we would wonder why. Busses will normally be less late than usual when the school holiday comes. If under the normal conditions, it is occasionally the busses arrived early than usual.”

-Male, blind-

“Late arriving of the bus was already normal for me. That is why I decided to come with the taxi to my work place. At least I am just late because stuck in road congested. Save for waiting time. But the taxi

fare is much expensive than the buses fare. But what can I do if that is the only choices that I have?”

-Female, blind-

“In the morning and evening especially during the time that people out to go to the office or want to back home, usually if monorail the schedule will be every 5 minutes to arrive, if I am not mistaken. LRT, I am not so sure because I rarely use. But if by bus, I think RapidKL itself was afraid to provide the schedule because the road was congested in KL at that time. Monorail or LRT certainly will not be a problem because it will not facing the congestion.”

-Male, blind-

d. Human Behavior – Driver

The attitude of the bus drivers was also becomes one of the barriers to the passengers of disabled people, particularly for those with vision disabilities and physical impairment. A total of 23 (49%) respondents stated that they have problems with the bus driver. Among that, unhelpful driver was 91.3% of it, 100% have stated that that the bus driver is irreverent and often stop the bus at the improper stop.

Meanwhile 78% of them notice that the bus driver does not use the facilities provided for the use of disabled people. Such attitude of bus drivers extend the difficulty of disabled people to embark or disembark to/from the bus.

National Transportation Access Research Project (2009) indicates that the attitudes of drivers and operators are a barrier to the accessibility of public transit. Lack of the drivers knowledge was also becomes a barrier for disable people in accessing to the public transit such as ignorance of disability-related.

“When I enter to the bus, I was informing the driver that I wanted to disembark at the certain bus stop. Yet sometimes the driver does not notify me when the bus arrived at the stop it should be. When I miss that stop, it was quite difficult because I had to take another bus to turn back. Then I have to cross the road and going to wait for another bus. It will create a networks problem to me.”

-Male, blind-

“I experienced the ordeal when my friend and I wanted to go to Central Market. When we got on the bus, we had informed the bus driver that we want to stop at Central Market. But what happens was, when the bus arrived at the place, the bus driver did not inform us.

But my friend is quite familiar with the area and he can guess that we arrived at the Central Market. To ensure this, he went to the driver and asked the driver whether they had arrived to the Central Market or vice versa. What happened was the driver informed us that they have arrived at the Central Market, and if we want to disembark, we can do so and if not, we may remain on the bus. We straight away disembark from the bus. Actually the bus stops in the middle of the road at the traffic light in front of the Central Market. When we went down, the lights turned to green. Others drivers honked at us. We do ignore it and keep walking up to the opposite side. This circumstances are often happens not only at this stop but at other stop too.”

-Male, blind-

“During RapidKL launching their new buses with facilities for the disabled people, we were invited to use it. At that time we were informed that on the bus has an audio visual display system which provides information to the deaf while a speaker announcement system is available to notify the blind people of incoming stops. But the problem is that the said system only available on the launch day, after the launching day, all is back to normal.”

-Male, blind-

e. Human Behavior – Passenger

Among the passengers of the bus there are passengers who are appreciates and respects the needs of disabled people when they use the public bus service. However, not all of them are high-minded passengers. 47% of the respondents were informed that there was a problem with the other passengers. 36% of the 22 respondents were informed that there was among the passengers who do not give priority to disabled people such as giving the way to disabled people to the bus or even give their seats to be occupied by a disabled people. 68% of them stated that other passengers do not provide assistance in the form required and 100% of them agreed that the other passengers are often rush to catch a bus without concerning about the others.

Transport for London (2010) reported that disabled people 'love' to push each other in order to board and they also have to wait longer to board the bus or train during peak hours when services, stations and stops are busy. This can lead to physical discomfort and also feeling of frustration. Travelling at peak time means that there is often a lack of available seats and disabled people find that it is common that other passenger do not offer their seats to disabled people, even the seats especially reserved for them. School children are identified as

being particularly unwilling to give up their seats and disabled people find them loud and disruptive which contributes to a feeling of being 'unsafe, frustrated and neglected'. Parents with pushchairs will make little accommodation for disabled people in the bus.

"If I catch the bus during overcrowding, it is difficult to other passenger to offer their seat to me. I rarely will be given a seat in such situation. When the bus stopped at another bus stop, passengers are jostling for a ride and sometimes I have been pushed backward by them."

-Male, blind-

"Most of the passengers would not think of other people when they ride the bus to and back from work. What they think is to get to the destination as soon as possible. The same goes for me. So it's hard to get them to give cooperation to the other passenger in the bus during the peak period even though they see the fact that we are disabled."

-Male, with stick-

f. Human Behavior – Public

Apart from the attitude of bus driver and bus passengers, disabled people also have to face the hassle from public around them. In

response to the interview, 20 (43%) respondents claimed that the public behavior are also become an issue to them. Some of the public were ignoring them when been asked to show the way to the bus stop or asked about the bus number. It has been informed by the disabled people in the interview that sometimes the public sees them as a people who always make other people in trouble. It is more towards the perception of the society on disabled community. 25% of the 20 respondents said the public does not help, and 55% stated that the bus facilities provided for used of disabled people regularly abused by the other passenger or public.

“Sometimes I found that the bus could not stop exactly in front of bus stop platform because there is taxi queue at the bus stop waiting for passengers. It is considered abusing of facilities. When they queue up there, how the buses want to enter to the stop to drop off passengers? The normal people may easily embark or disembark to/from the bus but what about us? “

-Male, with stick-

g. Communication – Information and Signage

In terms of communication, 33 (70%) respondents agreed with the statement that there is a lack of information and signage in public bus

system in Klang Valley. This has putting them in the difficulties atmosphere. For example, the lack of announcements at every stop cause the blind people often miss the stop for not realizing that the bus carrying them are past the stop that they are looking for. The absence of visual information can also give the same effect to deaf people, but for those who are deaf, they still have the advantage to identify the area. The absence of route maps at every bus stop will give some difficulties to them to confirm for the bus of the next journey. This is also related to the bus schedule. Almost all bus stops do not have information on the schedule of the bus. This is not only troublesome to disabled people, even to those who are normal and foreign tourists are also will face difficulties to identify which bus they want to catch on their next journey.

33% of respondents indicated if there is route map at the bus stop would help them in identifying their trip, 27% inform difficulties because bus stops are not numbered and they have identify the bus stop by the name or any suitable landmark, 30% with the problem in the absence of visual information on the bus (mostly for deaf people), 61% with the problem in the absence of audio information on the bus (specifically to people with visual impairment) and 79% said that they have a problem in the absence of bus travel schedule at bus stop. Some disabled people wanted more way-finding information to assist

navigation through stations and more accurate bus timetables in order to plan their journeys with greater precision (Transport for London, 2010).

Lack of access to transit-related information presents barriers to access on public transportation such as improved access to transit system information will increase accessibility of public transit in the community. Communication is also considered as access barrier. These categories included drivers calling out stops, visible displays of stop information, transit route information, etc. (National Transportation Access Research Project, 2009).

“When I heard the noise from bus engine, and if I feel that I was alone at that bus stop, I quickly ask the bus driver about the destination of the bus. If there is other passenger together, I would ask and ask. That is the only way for me to ensure the arrival of the bus that I want to catch for. If we are ashamed or afraid to ask, then we will spend long time at the bus stop. I do not care if the public feel sick of my questions. If they are in my shoe, I am sure they will do the same. As a blind man, what else can I do to get information except to ask people around me?”

-Male, blind-

“Most experience I cannot forget is when I want to ask about the trip and the bus that I should be boarded. I use sign language. It is quite difficult because our communications in two separate languages. So to ensure that this does not repeated, I always bring a note pad and pen. Easy. No. I do not know that I can make travel planning and arrangements through the RapidKL website.”

-Male, deaf-

I'm weird, why we do not have information related to bus travel and bus schedules at every of our bus stop. In Shah Alam, at least there is an area's map (but not bus travel map). In KL, Puchong, Klang, Subang Jaya and Petaling Jaya, the bus stop is empty from bus information. However, there is commercial advertisement at bus stop which only giving benefits to the local authorities.

-Male, with stick-

“When I asked the public about the direction to the bus stop that I should wait for the bus, I was a bit confused on how they give me the direction and name of the bus stop. I think it would be better if the bus stop is numbered, same as how RapidKL done to it buses. Each of the buses is identified by the number. They can use the same principal at each bus stop.”

-Male, blind-

4.3.7 The Stories of the Successful of Accessibility to Public Bus Services

Although most of the respondents gave a statement that they are faced with barriers while using public buses, but they also some do not deny that there are some improvement made in the service compared to few years back. However, it is not a complete success because there are still many things that need to be addressed to improve from time to time. It is described here aimed to compare between the success and the barriers of accessing to RapidKL public bus transportation by disabled people.

- a. The conditions of bus stops are now much better than before because most of the bus stop will be provided with roof.

“The bus stop before and now is much different. Previously there is only a bus stop sign bus. We have to stand while waiting for the bus. But now, the bus stops are roofed and walled. So if the day is raining, the condition is not too severe. We are still getting wet but not drenched.”

-Male, blind-

- b. Bus now has a hydraulic system that allows the driver to stop the bus at the same level with bus stop's platform. This is to minimize the gap between the bus floor and the bus stop's platform.

c. Buses also are equipped with a ramp to facilitate disabled people in wheelchair to board.

d. Some bus stops now have electronic bus arrival information. This feature is very useful for those deaf people.

“The bus stop in Kuala Lumpur prepared in accordance with the by-laws such as MS1311 and MS1331. The bus stop platform is about the same level with the bus stairs. The bus can stretch ramp to the bus stop. Buses also have a hydraulic system. So definitely there is no problem with the facility. However, the facilities provided are sometimes not fully utilized. That is the issue now.”

-Male, blind-

e. There is also bus driver who are kind and ready to assist as required by the disabled people.

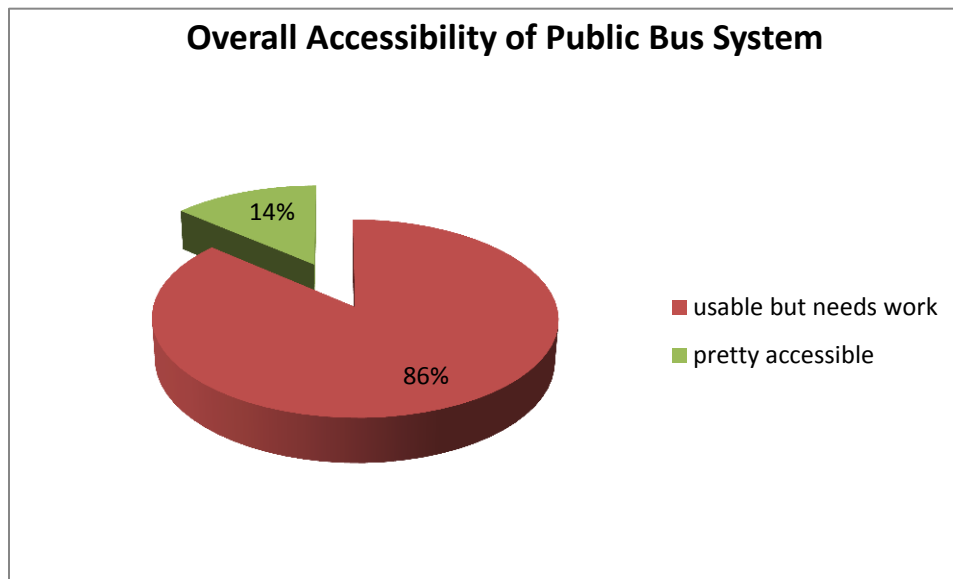
“I ever met with the bus driver who was kind-hearted. From I started boarding the bus until I disembark from the bus, he did help. He left the bus with other passengers inside, just show me the way and ensure I cross the street safely. I'll remember it all the time.”

-Male, blind-

4.3.8 Overall Accessibility to Public Bus

Respondents have been asked to rate the overall accessibility of the public bus transportation system in their communities for disabled people. A total of 47 respondents responded to this inquiry. Results from this rating can be seen in the figure 4.2.

Figure 4.2:
Overall Accessibility of Public Bus System



86% of the respondents indicated that the recent public bus system is usable but needs work while another 14% indicate that the existing is pretty accessible. "Needs work" here means disabled people are able to access to Rapid KL public bus transportation, but they are requiring assistance from other person or access it by themselves with some hardship. Perhaps why most of them rating as usable but needs work is that because they are

not really familiar with the system or need more progress to increase accessibility of public bus for disabled people needs to be made (National Transportation Access Research Project, 2009).

Respondents were also given the opportunity to rate the overall improvement of the public bus system. A total of 47 respondents responded to this inquiry. About 61% of respondents indicated that there is an improvement in accessing to public buses and the remaining of 39% indicated that progress can be seen significantly.

4.3.9 Results of Observational Study

Based on the feedback obtained through interviews conducted, observations have been made on RapidKL buses with disability's sign. This is to strengthen the comments obtained from the respondent in respect of accessibility to public bus transportation system for disabled people in the Klang Valley. Other than that, it is also to see the truth of the statement as stated in the problem statement and in the literature review concerning of the public bus transportation system.

Observations have been made in a way to make travel plans through the RapidKL website. The starting check point to another check point has been

set out during making the travel plans. To reach the designated check point, the journey should through bus interchange at least 2 times.

A checklist has been prepared before starting the journey where the list is categorized into two parts, namely buses and bus stops. This is to ensure the necessary elements observed is less missing out. For the elements in good condition, it has marked 'yes". For the element not in good condition, it has marked as 'no". The full schedule for the list of observations made is as contained in Appendix 7.

Based on the observations made, all the buses that has boarded has basic features like low-floor, step-free, handrails/ grab bars, space for wheelchair, seat for disabled people, stop button, lighting, ticket facilities, seat belts for wheelchair user and emergency window panes.

However, there are four features that cannot be confirmed the uncertain existence which are ramp, audio information on board, visual information on board and also door safety light. This is because no disabled people are boarded during observation made.

All buses are clean except there is water dripping out of the air conditioning in some buses. This condition can cause a bit of discomfort to the

passengers because they might fear of their clothes are getting dirt by the water droplets.

Observations indicate that the bus stop does have many weaknesses. All the bus stops are dirty and a bit less manageable. Rubbish bins are not properly covered which caused the passenger feel uncomfortable.

Surface of the foot paths quite harmful to a wheelchair because of their unequal surface and sometimes there are missing tiles and impinge hole. The high slope of steep ramp makes it dangerous for wheelchair users.

There is no bus travel maps and bus schedule at all bus stops. In the 48 routes observations made, there were six bus stops with electronic bus arrival information but 4 of them are not working.

Most bus stops are covered and walled to provide some comfort to the passengers. There are also seats for passenger to seat while waiting for the bus.

It is noticeable that every bus stop does not have the numbers and do not have information about the buses that passing through it. Other than that, the observation found that the bus stop at the prime area is provided with tactile guiding blocks used by those who are blind as a travel guide.

“There is tactile guiding the block at some bus stop (maybe the chosen bus stop I guess). But sometimes it make us little confusing when it suddenly disappeared. We shall be somewhat less sure whether to be to the left or to the right.”

-Male, blind-

4.4 Conclusion

Results of interviews conducted, it can be concluded that the ability to access to the public bus is quite significant to the disabled people around Klang Valley, particularly to those who face vision problems. However, this study also found that they have choices of public transport such as monorail, train and taxi. Unfortunately monorail and trains have limited routes, therefor public bus is a transport that is offering the connecting services to the other public transport services (Prasarana, 2011).

The affordable access of public bus transport services may also encourage disabled people to participate in social and community activities such as shopping, work, school, leisure and so on. In the context of accessibility to RapidKL public bus, provides the accessible facilities to disabled people is necessary so that they can live independently in the community, but the facility provided should to be in line with their needs and not just to provide them but at the end of the day it can't be fully utilized.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1 Introduction

This chapter will discuss the findings, conclusions and recommendations to overcome the difficulties encountered. The study found will be used to make some recommendations for the benefit of the organization and also for the future research.

As stated in the first chapter, there are two objectives of this study. The first objective is to gain a better understanding of overall disabled people satisfaction in Klang Valley accessing to public bus transport and the second objective is to identify the issues of accessibility of existing public bus transport structure in Klang Valley.

5.2 Discussion

To complete this study, the discussion focuses of the two objectives of the study based on the outcomes from chapter 4. The aim is to understand on to what extent the two objectives in Chapter 1 have been achieved in this study.

The initial purpose of this study was to identify whether the RapidKL public bus transportation services in the Klang Valley is truly accessible and fully utilized by the disabled people in line with the government's objective (Ministry of Transport, 2011)

as stated in the problem statement. It is also to identify the barriers faced by disabled people in accessing to Rapid KL public bus transportation services based to their types of disability. Other than that, we may also see through this study is whether the accessibility to RapidKL public bus transportation services affected the quality of life for disabled people or otherwise.

Access to public bus continues to be important in disabled people life. This is indicated by the 62% of the respondents in this research. For example respondent were asked how the lack of accessible to public bus transportation services would give the impact to their daily life and all respondents indicated that it would affected their needs to works and leisure/shopping, increase transportation expenses and made them less options in mode of public transport. They are using public bus transportation services because public bus is more comprehensive and cheap compared to other public transport services. However, 38% of them would have not much impact on the public bus services. This is because they use their own vehicles or have an option to not to use public bus as their mode of transportation. Result from the survey is as follow:

Table 5.1:
Impact of Accessibility to Public Bus by Disabled People

Category	Items	No. of Respondent	Percentage
Impact of accessibility to public bus	<u>With Impact</u>	29	62
	<i>Save fare expenses</i>	23	80
	<i>need to go for work</i>	29	100
	<i>need to go for leisure/ shopping</i>	29	100
	<i>More options</i>	17	59
	<u>Without Impact</u>	18	38
	<i>No significant impact</i>	11	61
	<i>Use other transport as alternative</i>	18	100
	<i>Use own transport</i>	10	56

“Every day I use public bus to work. If public bus is not accessible, the impact on me is that I have to take a taxi as an alternative. This will increase my transportation’s fare.”

-Female, deaf-

“If I do not get access to the bus, I can use other public transportation services as an alternative. So it was not affecting me much.”

-Male, blind-

“Now I used taxis to work because it is easy. If there is a bus from my house directly to here, of course I would use it because it is cheap compared to the taxi fare. Every day I have to spend at least RM17.00 for taxi fare.”

-Female, blind-

The main objective of this study is to gain better understanding regarding the overall satisfaction among disabled people while accessing public bus in Kelang Valley and identifying the issues of accessibility of existing public bus transport. The following discussions of the study are based on the research objectives as presented in Chapter 1 which are:

5.2.1 To gain a better understanding of overall disabled people satisfaction in Klang Valley while accessing to RapidKL public bus transportation services.

Based on the assessment made by the respondents on the overall quality of access to public bus transportation system, it was found that the majority of respondents agreed that public transport can be accessed by them, but with hardship (86%) while another 14% have indicated that they access the public bus conveniently. In the other words, this indicates that the goal of RapidKL to make public bus transport in the Klang Valley to be more competitive and able to provide service to all passengers, including those from the disabled is still not achieved. The government intention to provide public transport options to all users (Kuala Lumpur Structure Plan 2020) in the Klang Valley by year 2020 whereby it is easily accessible, quick, comfortable and convenient are also considered long way to go. In my opinion, there are many factors need to be considered when the related bodies is planning for the comprehensive and efficient public bus system. As stated in the literature review, Wagener and

Spek (2006) mentioned that 3 factors should be consider in planning of public bus services system which is vehicles, infrastructures and information and communication. These 3 factors are seen as the basic for planning a public transportation system that can provide the easy accessibility to disabled people to access to the RapidKLpublic bus transportation services with less hardship.

Results from this study show that 15% of respondents use the RapidKL public bus transportation services only occasionally. There are also some of them just try it once and ended up not trying at all. The factors that caused they are occasionally access to public bus transportation services is such the barriers that they have to face while accessing to public bus transportation, not confident to access independently and the weather conditions rather not allow. For example rainy weather will affect the movement of wheelchair user and similarly, if the weather is hot.

The attitude factor which is less of confident among them has making them do not use the public bus at all. This was proven when there were 7 respondents who do not use public bus due to the feeling of less confident and insecure due to their previous experiences.

In principle, public bus transportation provided by the RapidKL is seen having an improvement compared to previous years. Buses with disabled-friendly features that have introduced by Rapid KL in recent years are providing

accessibility for the disabled to use. Overall, most of the disabled people in Klang Valley are still unable to access to public bus services independently and confidently.

5.2.2 To identify the issues or barriers of accessibility of existing public bus transport structure in Klang Valley.

Although RapidKL has been providing disabled-friendly buses and improve bus stops in the Klang Valley in recent years, yet the barriers for disabled people to use public bus service is still there. This can be seen in the table 4.1 (chapter 4). The most important barriers are bound to the human attitude especially the busses driver attitude and other bus passengers. This was proven when 49% of the respondents had difficulty with the bus driver and 47% had difficulty with the other passengers.

Quite critical when the bus driver did not stop the bus at the bus stop should be but stop the bus to drop off passengers in the road in front of traffic light or away from the bus stop. This not only makes difficult to disabled passengers who want to disembark even to the passengers with disabilities who want to ride the bus are also face the difficulties. 23 respondents had allowed this statement and the observations made also reaffirmed this statement.

The most obvious barriers in accessing to public bus are when all the respondents (47) interviewed was stated that they could not anticipate the time of the bus arrived in their place. This may be due to road congestion factor around the Klang Valley, particularly during peak periods. Total current population in the Klang Valley is 6.3 million and is estimated that the population will increase to 10 million by 2020 and will indirectly increase the number of public transport in the capital in the Klang Valley (National Land Public Transport Master Plan 2012). Private transport statistics issued by the Ministry of Transport Malaysia showed that the number of private transport in Kuala Lumpur and Selangor until May 2012 was 6,449,190. This reinforces the assumption that the overcrowding in the down town of Klang Valley led the difficulty of RapidKL public bus to arrive the destination as intended.

National Land Public Transport Master Plan 2012 has reported that in the year 2010 alone the number of passengers of public buses during peak hours has increased to 150,000 people of the total 139,500 in 2009. It is expected to increase by 25% by 2012. This may have explained why 21 respondents have complained that buses are too crowded and make them difficult to access to public bus.

The study found that the activity of majority of disabled people in the Klang Valley was dependent or influenced by public transport buses. This is because even though they have other alternative of transportation such as trains and

private vehicles but public bus services is seen more practical to be used by them in terms of fare and also the size of the network services. The evidence of the contribution of RapidKL public bus transportation services in the life of disabled people is that some of them continue to use the bus to get to the place of work, shopping and leisure even though they faced the barriers while accessing it. The entire barriers while accessing to Rapid KL public bus transportation services as listed in table 4.1 (Chapter 4). Therefore, the second research question was answered with the achievement of the second objective of the study.

5.3 Suggestions

As a result of this study, it can be suggested that public transport bus rapid KL to have improvements that aim to provide services to people with disabilities can be fully achieved by 2020. Among the recommendations it deems suitable value for improvements are:

5.3.1 Information Provision

The availability of information before and during a journey can have a profound effect on the passenger's experience of that journey and can even be a determining factor of a disabled person's decision to travel or not. This is regardless of the accessibility of vehicles and infrastructure, and is

demonstrated by several UK research studies. Most previous was the investigation of disabled people's information requirements, commissioned by the Department for Transport in 2003 (Transport Research Survey,2006).

Suggestions for improvement to the effectiveness of information provision are as follows:

- a. Map of public transport network around the Klang Valley should be placed at each bus stop. This can help to provide information to the public, including those with disabilities. For example, if there are those among the blind people would like to ask how he wanted to go to certain places; those at the bus stop can provide travel information based on the information available at the bus stop. Currently, the bus stop is just filled with commercial advertisements on products, only.
- b. Facilities for information should be activated so that it can be utilized to the fullest. For example, visual information is not activated during the observation is made. All buses are marked with the disability' symbol does not activate visual information system that they have. This system not only facilitates the disabled who ride the bus, but other passengers can also benefit from it.
- c. Bus stops should be numbered and the numbers should be available at each bus stop as an "identification number". This will make easier for

passengers to identify the stop when they want to disembark. For example, if someone is asking us about the bus stop that they need to disembark to the X destination, at present we have to inform the nearest landmark to facilitate the him/ her but if it is labeled with a number, we just have to mention the bus stop number to him/ her. This will avoid confusion.



Figure 5.1 :
Bus stop in Kuala Lumpur. (Route : U60)



Figure 5.2:
Signage at bus stop in London.

5.3.2 Behavioral Provision

Attitude and behavior of bus drivers, bus passengers and public people are also plays an important role for disabled people to access to public bus. This is based on a study showing that most disabled persons who use the bus gives negative comments towards their bus driver, passengers and the public people.

N Caroline Law & David Ewensiaze (2011) highlighted the poor attitudes and behaviors of some bus drivers who allow buses to become overcrowded, are not 'disability aware', drive off before people are seated, don't wait for people to get up and off once they have stopped and don't manage where people stand and sit on buses.

Suggestions for improvement to the effectiveness of behavioral provision are as follows:

- a. Attitude of the bus driver disabled need to be improved. They need to be trained properly and should have a strong self-discipline. During observations made around the Central Market, it is found that the bus driver do not drop off the passenger at the proper place. Driver stopped the bus in the middle of the road to drop the passenger due to congestion at the bus stops in the area. For disabled people who

are blind, they certainly do not know the presence of the bus and for disabled persons in wheelchairs; they would be hard to ride the bus because the bus stopped in the crowded street. Or if they want to come down from the bus, it was quite hard and dangerous to them too. Training given to the bus driver should be on periodically basis.

- b. There is also bus driver who simply berated the passenger. Based on the studies conducted, there are those among bus drivers who scold the disabled people if they missed stop and ask for help from them. Drivers should be made aware of their responsibilities right to assist passengers in need of assistance, especially among passengers with disabilities.

“It is difficult if I take a bus. Not that always missed stops. Of course, we do not see this inconvenience to people then. When we notice that we've missed stops, tells the bus driver, he scolded us back. Shame when scolded like that front of other passengers. Although I cannot see the facial reactions of other passengers but very shy when so state that. So I have to take taxi. Although expensive, but convenient and not embarrassing myself”

-Female, blind-



Figure 5.3:
Driver stop the bus far from bus stop to drop passenger. (Route U2A)



Figure 5.4 :
Misused of Bus Stop by Taxi Driver (Route U2A).

5.4 Limitation of the Study

The time allocated is quite short, only about 3 months. A relatively short time is quite limiting to get more detailed information. Other than that, my status as a part-time student also provides a considerable challenge in this study.

The absence of in-depth academic study of the safety hazards associated with public transport passengers is a barrier to see how public transport currently safe to be used by disabled people. This is due to the absence of a measurement tool in safety hazard to measure the level of safety hazards of public transportation passenger.

Interviews cannot be carried out towards disabled people with hearing and speech-impaired. This is because of the communication's barrier. Information from this group was significant for this study because they are also among the users of public bus transportation. Since the time available is quite limited, so the primary data for this group had to be gathered through 'written-communication' by using interview protocol.

5.5 Conclusion

With the establishment of the Malaysian Land Public Transport Commission, it is hoped that all planning for public transport in Malaysia will aggressively take into account the needs of disabled people. Not all of the disable people have the ability to

have their own vehicles. Some of them rely on public transport as their mode of transport.

From surveys, we can conclude that public transport in Malaysia today is giving the various alternatives for disabled people to move around for their daily activities.

Public buses are seen to be more comprehensive than other public transport because of cheaper fares and more comprehensive services. Yet certain barriers make disabled people rather less comfortable in using RapidKL public bus transportation services, especially for those who have other mode of transport as an alternative. Only those who do not have any other option will use public bus despite have to face the barriers to access.

Based on literature review done, Wagener and Spek (2006) has pointed out that to ensure the effective of public transport bus services; three factors should be well considered while planning the public bus systems namely infrastructures, vehicles and information. However, this study found that another factor to be considered is human behavior especially related to the bus driver. Attitude of other bus users may be difficult for us to change, but the attitude of bus drivers is one thing that can be improved. The systematic training and monitoring by the RapidKL will help drivers to be more professional and ethics in their career.

The factor of vehicle design, infrastructure and information is certainly to some extent have undergone transformation. However, this still needs to be refined so that what is provided is able to be fully beneficial by disabled people.

All these factors, if handled properly, it may contribute to the utilization of the facilities provided which should be used as intended and not merely decorative. Facilities available but not used are considered as a waste of investment.

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